

**International Publications
Awards
Cairo University**

Issue IV-B

May 2009



Dear colleagues,

We are pleased to introduce this new issue of the international publications of Cairo University. It is a further step of our university, and the distinct contribution, reflecting the scientific ability of staff members, which conforms to international quality standards.

This is the fourth issue of the international publications of Cairo University staff members during the year 2008.

The purpose of issuing these publications is mainly to introduce this work to the academic community, demonstrate the different research abilities of Cairo University researchers, and encourage them to increase the quality and quantity of their research.

As part of our future plan, we aspire to build on our current success; as the weightier challenge is still to come. So in order to keep our rank in its high level we are compelled to continue on publishing high quality research.

We would like to assure you that the administration will spare no effort to support and reinforce these goals. We congratulate all colleagues who were granted the awards for their international publications of the year 2008 and wish them all the best for their future endeavors.

We are also pleased to inform you that this policy will continue to be in effect for the year 2009.

Prof. Hussein M. Khaled

**Vice - President for post-graduate
studies and research
Cairo university**

Prof. Hossam Kamel

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Cairo University

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Prof. Hossam Kamel

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Prof. Hussein M. Khaled

(تم التنازل عن قيمة المكافاة تشجيعا لشباب الباحثين)

National Cancer Institute

Dep. : Medical Oncology

Name : **Hossam Mohamed Kamel**



Title : Hematopoietic SCT in Egypt

Authors : H. K. Mahmoud

Published In : Bone Marrow Transplantation (2008) 42, S76-S80

ISSN

0268-3369

Impact Factor

3

Abstract :

Hematopoietic SCT is now an established treatment modality with definitive indications for many hematological disorders. However, this line of treatment requires tremendous resources, and it becomes increasingly difficult for transplanters practicing in the developing world to reconcile the difference between what is possible and what is available. On the basis of 18 years of experience and more than 1300 transplants, this article will focus on special issues, which we think are important for hematopoietic SCT practices in developing countries, taking the program in Egypt as an example that may be applicable to other countries in the developing world. The SCT program in Egypt started in 1989 on a narrow scale. In 1997 the transplant rate increased dramatically with the opening of the SCT unit at the Nasser Institute. Our team is registered in the Center for International Blood and Marrow Transplant Research. The total number of transplants performed till June 2007 is 1362, 80% of the cases are allogeneic and 20% autologous. There are seven other centers in Egypt performing mainly autologous transplants.

Keywords :

Rate; Donor; Aplastic anemia; β -thalassemia; Toxicity; Cost.

National Cancer Institute



Dep. : Medical Oncology

Name : **Hussein Mostafa Khaled**

Title : Genetic profile of Egyptian hepatocellular-carcinoma associated with hepatitis C virus Genotype 4 by 15 K cDNA microarray: Preliminary study.

Authors: Zekri AR, Hafez MM, Bahnassy AA, Hassan ZK, Mansour T, Kamal MM, Khaled HM.

Published In : BMC Res Notes. 2008 Oct 29;1:106.

ISSN

Impact Factor

Abstract :

Background: Hepatocellular carcinoma (HCC) is a preventable disease rather than a curable one, since there is no well-documented effective treatment modality until now, making the molecular study of this disease mandatory. **FINDINGS:** We studied gene expression profile of 17 Egyptian HCC patients associated with HCV genotype-4 infection by c-DNA microarray. Out of the 15,660 studied genes, 446 were differentially expressed; 180 of them were up regulated and 134 were down regulated. Seventeen genes out of the 180 up-regulated genes are involved in 28 different pathways. Protein phosphatase 3 (PPP3R1) is involved in 10 different pathways followed by fibroblast growth factor receptor 1 (FGFR1), (Cas-Br-M ecotropic retroviral transforming sequence b (CBLB), spleen tyrosine kinase (SYK) involved in three pathways; bone morphogenetic protein 8a (BMP8A), (laminin alpha 3 (LAMA3), cell division cycle 23 (CDC23) involved in 2 pathways and NOTCH4 which regulate Notch signaling pathway. On the other hand, 25 out of the 134 down-regulated genes are involved in 20 different pathways. Integrin alpha V alpha polypeptide antigen CD51 (ITGVA) is involved in 4 pathways followed by lymphotoxin alpha (TNF superfamily, member-1)- (LTA) involved in 3 pathways and alpha-2-macroglobulin (A2M), phosphorylase kinase alpha 2-liver (PHKA2) and MAGI1 membrane associated guanylate kinase 1 (MAGI1) involved in 2 pathways. In addition, 22 genes showed significantly differential expression between HCC cases with cirrhosis and without cirrhosis. Confirmation analysis was performed on subsets of these genes by RT-PCR, including some up-regulated genes such as CDK4, Bax, NOTCH4 and some down-regulated genes such as ISGF3G, TNF, and VISA. **Conclusion:** This is the first preliminary study on gene expression profile in Egyptian HCC patients associated with HCV-Genotype-4 using the cDNA microarray. The identified genes could provide a new gate for prognostic and diagnostic markers for HCC associated with HCV. They could also be used to identify candidate genes for molecular target therapy.

National Cancer Institute

Dep. : Medical Oncology

Name : **Hussein Mostafa Khaled**



Title : Changing pattern of hepatocellular carcinoma (HCC) and its risk factors in Egypt: possibilities for prevention.

Authors: Lo AC, Kleer CG, Banerjee M, Omar S, Khaled H, Eissa S, Hablas A, Douglas JA, Alford SH, Merajver SD, Soliman AS.

Published In : Mutat Res. Rev mutat

ISSN 1383-5718

Impact Factor 4.353

Abstract :

The burden of hepatocellular carcinoma (HCC) has been increasing in Egypt with a doubling in the incidence rate in the past 10 years. This has been attributed to several biological (e.g. hepatitis B and C virus infection) and environmental factors (e.g. aflatoxin, AF). Other factors such as cigarette smoking, occupational exposure to chemicals such as pesticides, and endemic infections in the community, such as schistosomiasis, may have additional roles in the etiology or progression of the disease. Estimates of the burden of cancer caused by these factors provide an opportunity for prevention. Previously, there was strong evidence that hepatitis B virus (HBV) was the major cause of HCC in Egypt, but more recently HCV has become the predominant factor associated with the more recent epidemic of HCC. It has been well documented that Egypt has one of the highest prevalence rates of HCV infection in the world. The natural history of HCV infection and disease progression, however, are influenced by additional factors such as duration of infection, age at infection, sex, co-infection with HBV, the level of HCV viraemia and its genotype. The role of exposure to aflatoxins and development of HCC in Egypt was historically less clear. Nevertheless, recent food sampling surveys and population-based studies indicated that exposure to aflatoxins in Egypt may have been underestimated in the past. Recent results indicated that both local and imported samples were positive for aflatoxin B1 (AFB1, 17.5% and 20%, respectively), with concentrations ranging from 3 to 25 microg/kg. The level of AFB1 was dependent on the area of collection as well as the season of the year. In a population-based study, the level and frequency of aflatoxin M1 (AFM1, a major metabolite of aflatoxin B1 excreted in breast milk) was assessed as a biomarker of maternal exposure. The samples were collected from a selected group of 388 Egyptian lactating mothers during May-September 2003. Non-working status, obesity, high corn oil consumption, and the number of offspring contributed to the variability in occurrence of AFM1 in breast milk.

Prevention and intervention approaches directed to risk factors of HCC can play a critical role in its prevention. In the case of HCV infection a prevention programme can be achieved by changing personal behaviors and/or cultural habits which are risk factors for HCV transmission, such as injection with contaminated syringes, blood transfusion, surgical operations, venous catheterization, use of common syringes, dental treatment and circumcision at home. Prevention of exposure to aflatoxins can be achieved either at community (via good agriculture practices) or individual levels (treatment or dietary interventions). In conclusion, due to the alarming increase in the incidence of HCC in Egypt, there is a need to further investigate the contribution of these emerging risk factors to the development of HCC in Egypt. This may enable us to determine the susceptibility to HCC among high-risk groups and to provide these individuals with effective measures for early prevention or intervention.

National Cancer Institute

Dep. : Medical Oncology

Name : **Hussein Mostafa Khaled**



Title : Primary chemotherapy with low-dose prolonged infusion gemcitabine and cisplatin in patients with bladder cancer: a Phase II trial.

Authors: Khaled H, Emara ME, Gaafar RM, Mansour O, Abdel Warith A, Zaghoul MS, El Malt O.

Published In : Urol Oncol. 2008 Mar-Apr;26(2):133-6. Epub 2008 Jan 14.

ISSN 1078-1439

Impact Factor 2. 561

Abstract :

Background: Gemcitabine is an active agent in the treatment of bladder cancer. The enzyme deoxycytidine kinase catalyzes the phosphorylation of gemcitabine into the active gemcitabine triphosphate. After an infusion during 30 minutes, this enzyme will be saturated, therefore, accumulation of higher intracellular concentrations of the active gemcitabine triphosphate could be achieved by prolonging the infusion time of gemcitabine.

Patients and Methods: Based on previously published Phase I trials, the efficacy and safety of a combination of cisplatin and gemcitabine given as prolonged infusion were tried in a Phase II study of 57 untreated patients with stage III/IV bladder cancer, which is the most common malignant tumor among Egyptian males. Patients received gemcitabine (250 mg/m²) during 6-hour infusion) on days 1 and 8, and cisplatin (70 mg/m²) on day 2 every 21-day cycle.

Results: The 41 males and 16 females had a median age of 55 years (range 37-77). A total of 37 patients had transitional cell, 15 had squamous cell, 2 had adenocarcinoma, and 3 had undifferentiated cell carcinoma. The median number of cycles given to these 57 patients was 4 (range 1-6). Of 54 evaluable patients, 5 (9.4%) had complete remission, and 27 (50%) partial remission, for an overall response rate of 59.4%. These results are comparable to those of a previous Phase II study of the same combination but with gemcitabine given in the standard dose and schedule. Responses were observed at all disease sites. Both hematologic and nonhematologic toxicity were treatable and not severe.

Conclusions: Prolonged infusion of gemcitabine and cisplatin is an effective treatment for advanced bilharzial-related bladder cancer. Toxicity, especially myelosuppression, is surprisingly mild. This combination deserves to be tried in other different disease categories.

National Cancer Institute

Dep. : Medical Oncology

Name : **Hussein Mostafa Khaled**



Title : The changing patterns of bladder cancer in Egypt over the past 26 years.

Authors: Felix AS, Soliman AS, Khaled H, Zaghloul MS, Banerjee M, El-Baradie M, El-Kalawy M, Abd-Elseyed AA, Ismail K, Hablas A, Seifeldin IA, Ramadan M, Wilson ML.

Published In : Cancer Causes Control. 2008 May;19(4):421-9. Epub 2008 Jan 10

ISSN 0957-5243

Impact Factor 3.279

Abstract:

Objective: To evaluate temporal changes in histopathological types of bladder cancer and to assess associated changes in demographic, epidemiologic, and lifestyle risk factors.

Methods: We abstracted data from all available medical records from the National Cancer Institute of Cairo University (NCI-Cairo). Six calendar years representing 5-year periods between 1980 and 2005 were evaluated. Information on demographics, schistosomal infection, clinical symptoms of bladder cancer, and tumor pathology was abstracted.

Results: During this 26-year period, important changes in the frequency of histopathological types of bladder cancer occurred. We found a statistically significant association between time period of diagnosis and histopathological type. Patients diagnosed in 2005 had a sixfold higher odds associated with transitional cell carcinoma compared to those patients diagnosed in 1980 (odds ratio (OR) 6.00 (95% CI 4.00-8.97)).

Conclusions: These data strongly suggest that the histopathological profile of bladder cancer in Egypt has changed significantly over the past 26 years. Historically, squamous cell carcinoma was the predominant form of bladder cancer in Egypt; however transitional cell carcinoma has become the most frequent type. These results corroborate findings from a few small-scale hospital-based studies which conclude that the etiology of bladder cancer in Egypt has changed significantly over the past 26 years.

National Cancer Institute

Dep. : Medical Oncology

Name : **Hussein Mostafa Khaled**



Title : Molecular epidemiologic features of inflammatory breast cancer: a comparison between Egyptian and US patients.

Authors: Lo AC, Kleer CG, Banerjee M, Omar S, Khaled H, Eissa S, Hablas A, Douglas JA, Alford SH, Merajver SD, Soliman AS.

Published In : Breast Cancer Res Treat. 2008 Nov;112(1):141-7. Epub 2007 Dec 4.

ISSN 0167-6806

Impact Factor 4.453

Abstract :

Background: Inflammatory breast cancer (IBC) is a lethal form of breast cancer with unknown etiology. A higher frequency of IBC and a more aggressive IBC phenotype was reported in Egypt than in the United States. This difference in disease frequency and presentation might be related to molecular epidemiologic factors.

Methods: We used tumor blocks and demographic, epidemiologic, and clinical data of 48 IBC patients from Egypt and 12 patients from the United States. We counted tumor emboli in tumors before and after immunohistochemical staining with lymphatic vessel endothelial receptor-1 (LYVE-1), and measured the expression of RhoC GTPase protein in the two groups. **RESULTS:** Erythema, edema, and peau d'orange were found in 77% of the Egyptian patients as compared with 29% found in the US patients (P=0.02). The number of tumor emboli was significantly higher in tumors from Egypt (mean \pm -SD, 14.1 \pm -14.0) than in the tumors from the United States (5.0 \pm -4.0, P=0.01). The number of tumor emboli in LYVE-1 positive vessels was higher in tumors from Egypt (3.5 \pm -2.8) than tumors from the United States (1.6 \pm -0.5, P=0.15). We detected a high level of RhoC in 87% of the tumors from Egypt and 14% of the tumors from the United States (P=0.0003).

Conclusion: Patients from Egypt have a more aggressive form of IBC than those in the United States. Our analysis of IBC patients shows that distinct molecular phenotypes can be found when these two study populations are compared. Future studies should explore the epidemiologic and environmental exposures and the genetic factors that might lead to the different clinical and molecular features of IBC in patients from these two countries.

Table of Contents

<u>Faculty</u>	<u>Page</u>
Cairo University	
Medicine	2
Pharmacy	116
National Cancer Institute	183
Nursing	190
Dental and Oral	192
Engineering	194
Computers and Information	270
National Institute of Laser Enhanced Sciences	274
African Research and Studies Institute	285
Arts	288
Archaeology	298
Economics and Political Science	304
Commerce	315
Index	317



**Medical
Sciences**



**Faculty of
Medicine**

Faculty of Medicine

Dep. : Anatomy & Embryology

Name : Ibrahim Labib Abdalla



Title : Ultrastructural Study of the Effect of Air Pollution by SO₂ on the Respiratory Air-ways

Authors: Ibrahim L. Abdalla

Published In : African Journal of Health Sciences

ISSN

Impact Factor

Abstract :

Sulfur dioxide (SO₂) has been associated with excessive mortality during air pollution disasters such as that which occurred in Meuse Valley; Belgium in 1930; Donora Pennsylvania; in 1948 and London in 1952. The SO₂ particulate complex results chiefly from the burning of fossil fuels. Exposure can cause irritant and toxic effects on the human airways and result in broncho- constriction. It also can aggravate existing pulmonary or cardiac problems. A positive interaction between particles and SO₂ to produce morphologic changes in airways has been suggested by smog incidents; but has not been evaluated by experiments. So; this study was done to answer the following questions: (1) What morphologic changes are produced by repeated injury to airway epithelial cells by SO₂? (2) What is the time course of these morphologic features? (3) Can a model of acute bronchitis be created which is not due to infection? Ultrastructural changes occurring in the epithelial cells lining the airways of the experimental rats were studied. A sequence of epithelial changes was seen with exposure to 100; 200 or 400 p.p.m. for up to 4 weeks. For example: loss of cilia; vacuolation; pyknosis; goblet cell hyperplasia and the development of stratified squamous epithelium after 2 to 7 days at 200 p.p.m Higher doses (400 p.p.m.) produced squamous cell metaplasia after 2 weeks. Exposure to 40 p.p.m. SO₂ alone for 4 hours per day for 6 weeks produced no changes; but 24 hours after a 4 hours exposure to 40 p.p.m. SO₂ plus 0.74 gm of carbon dust per cu.m. of air; neutrophils were recruited into airway epithelium. It is suggested that this synergistic effect is due to the carbon particles adsorbing SO₂; which leaches off slowly; perhaps within macrophages; to recruit Leucocytes in airways.

Keywords:

Air pollution; SO₂; Ultrastructural effects; Respiratory air-ways.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Hussein Ghanem



Title : Alternate-Day Tadalafil in the Management of Honeymoon Impotence

Authors: Hussein Ghanem, Mohamed El-Dakhly and Rany Shamloul

Published In : Sexual Medicine

ISSN

1743 - 6109

Impact Factor

6.199

Abstract :

Introduction. Sildenafil has been used successfully in the treatment of honeymoon impotence. However; no study investigated the potential effect of tadalafil in the treatment of honeymoon impotence. **Aim.** The aim of this study is to evaluate the effectiveness of alternate-day tadalafil therapy in the management of unconsummated marriages.

Methods. This is a descriptive study comprised of a series of 45 patients. The time frame for the study was 2 years. Forty-five consecutive patients underwent a complete medical and sexual history as well as a focused physical examination. Education about the male and female genital anatomy and the sexual response cycle was carried out. Alternate-day tadalafil 10-mgtherapy was administered for 2-weeks-with the duration extended as needed. **Main Outcome Measures.** Primary efficacy endpoints were successful vaginal intromission and change in the abridged version of the International Index of Erectile Function (IIEF-5).

Results. Of 45 patients included in our study; 41 (91%) were able to achieve vaginal intromission and perform sexually. Thirty-four patients (76%) needed tadalafil for less than 1 month; five (11%) for up to 3 months; and two (4%) for more than 3 months. Four patients (9%) were unsuccessful. IIEF-5 improved significantly with alternateday tadalafil treatment in this subgroup of patients ($P < 0.001$). Treatment failures were managed by Intracavernous injection therapy; combined with psychosexual therapy; depending on the cause.

Conclusions. Tadalafil therapy was safe and effective in the short-term management of this selected group of honeymoon impotence patients. Controlled studies are needed to further confirm these findings.

Keywords:

Tadalafil; Erectile Dysfunction; Honeymoon Impotence.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Hussein Ghanem



Title : Cavernosal Alpha-Blockade: A New Technique for Investigating and Treating Erectile Impotence by GS Brindley

Authors: Sidney Glina, Alan Shindel, Ian Eardley, MChir, FRCS (Urol), FEBU and Hussein Ghanem

Published In : Sexual Medicine

ISSN 1743 - 6109

Impact Factor 6.199

Abstract :

Intracavernous injections still play a pivotal role today in the area of ED diagnosis and treatment [12]. Functional evaluation of penile arteries and veins (penile color Doppler; pharmacarteriography; and dynamic infusion cavernosometry or cavernosography) are all based on the appropriate use of the intracavernous injections . Finally; as predicted by Brindley; false negative—and false positive—results do occur and are reasons for continued research and optimization of test techniques and development of awareness of their true significance.

Keywords:

Erectile Dysfunction; Intracavernous Injection; Alpha blocker.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Hussein Ghanem



Title : Incisional Corporoplasty for the Correction of Congenital Penile Curvature: a Review of Two Suturing Techniques

Authors: H. Ghanem and R.M. Shamloul

Published In : International Journal of Impotence Research

ISSN 0955 - 9930

Impact Factor 2.059

Abstract :

This retrospective study was designed to evaluate the surgical outcome of correction of congenital penile curvature; via multiple vertical incisions in the tunica albuginea using two different types of suture material; simple inverted 2-0 PDS sutures versus Prolene 2-0 suture followed by closure with 3-0 vicryl. The study included 45 men with congenital penile curvature and surgeries were performed in four general hospitals. Patients were divided into two groups; Group A (n/424) included patients undergoing penile curvature correction using 2-0 PDS sutures; and Group B (n/421) patients undergoing the same procedure by placing an inverted Prolene 2-0 suture in the middle of the suture line and completing the closure of the incision line with 3-0 vicryl. The procedures straightened the penile shaft in all cases but a degree of curvature recurred in three cases (all Group A). No operative or postoperative complications occurred and no reoperations were needed. Four patients complained of penile shortening (all Group A). No recurrence was observed in the proline group (difference not statistically significant). Horizontal plication after vertical corporal incisions is safe and effective in the treatment for congenital penile curvature without hypospadias.

We advise avoiding overcorrection to prevent penile shortening.

Keywords :

Penile curvature; Penis; Penile induration; Penile shortening.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Hussein Ghanem



Title : An Evidence-Based Perspective to Commonly Performed Erectile Dysfunction Investigations

Authors: Hussein Ghanem and Rany Shamloul

Published In : Sexual Medicine

ISSN 1743 - 6109

Impact Factor 6.199

Abstract :

Introduction. Currently there is no universally accepted gold standard diagnostic test to differentiate psychogenic from physical erectile dysfunction (ED). Instead; sexual health specialists rely on a detailed history; a focused physical examination; and specialized diagnostic tests; to decide if the etiology of the ED is mainly psychogenic or organically caused.

Aim. In this review we point out the status of evidence-based principles in the area of diagnosis in Sexual Medicine.

Methods. We review the concepts of evidence-based medicine (EBM) in the area of medical diagnostic tests. We highlight four of the well-known diagnostic tests (penile duplex; phacoarteriography; pharmacocavernosometry/ cavernosography [PHCAS/PHCAG]; and nocturnal penile tumescence [NPT monitoring]) for ED evaluation within an evidence-based perspective. Main Outcome Measures.

Assessment of diagnostic tests for ED using principles of EBM. Results. Several good diagnostic tests are useful in the evaluation of men with ED. However; modern evidence-based concepts—mainly the likelihood ratio—have not yet been applied to these tests to obtain their maximum clinical benefits.

Conclusions. While penile duplex/color Doppler has good evidence of supporting its use in the diagnosis of arteriogenic ED; data supporting its diagnosis of a physical disorder associated with cavernous venous occlusion dysfunction are lacking. PHCAS/PHCAG's main drawback is an unknown positive predictive value and a possibility of frequent false-positive results. NPT has many advantages when differentiating psychogenic from organic ED; however; several questions related to its physiological mechanisms do exist.

Keywords :

Erectile Dysfunction; Penile Duplex; Nocturnal Penile Tumescence.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Osama Kamal Zaki Shaeer**



Title : Glans Reconfiguration for Management of Glanular Mutilation

Authors: Osama Shaeer, Ashraf El-Sebaie, Ahmed Sherif, Ahmad El-Sadat and Ahmed Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: The glans penis is prone to mutilation in a handful of conditions; some accidental and others iatrogenic. Deformed functioning remnants of the glans challenge the surgeon's decision. Neither is the glans totally amputated; justifying a neoglansplasty; nor are the remnants cosmetically acceptable; though retaining sensibility and engorgement.

Aim: In this work; we described the "reconfiguration of the glans penis" whereby deformed glanular tissue remnants can be made into a functional and cosmetically acceptable glans.

Methods: Five patients with separate mutilated lumps of functioning glanular tissue were operated upon. The lumps were mobilized and flattened into sheets and configured to redrape the summit of the penis; minding their vascular and nerve supply.

Main Outcome Measures: Cosmetic and functional outcome. Results: The outcome was cosmetically acceptable for all patients in comparison to the preoperative state.

Conclusion: Glans reconfiguration may possibly confer an acceptable cosmetic outlook to a mutilated glans without compromising valuable functional characteristics.

Keywords :

Glans; Reconfiguration; Amputation; Trauma; Mutilation.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Osama Kamal Zaki Shaeer**



Title : Shaeer's Corporal Rotation for Length-Preserving Correction of Penile Curvature: Modifications and 3-Year Experience.

Authors: Osama Kamal Zaki Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: Correction of penile curvature by corporal rotation enabled the correction of 90 degrees ventral curvature with neither shortening nor erectile dysfunction. However; some limitations were described; and only one case was reported upon.

Aim: This work described a 3-year experience with corporeal rotation; the modifications addressing and eliminating its drawbacks and limitations; as well as the long-term follow-up of 22 patients. Methods: Modified corporeal rotation was performed in 22 patients with various degrees of curvature. Degree of deviation; erect penile length; symmetry; and erectile function were evaluated and compared pre- and postoperatively.

Main Outcome Measures: Correction of curvature; resultant sexual function; penile length; and girth. Results: Full correction of curvature was achieved in 20 out of 22 patients; with no shortening; asymmetry; or erectile dysfunction. Residual curvature in two patients was no more than 10 degrees.

Conclusions: Corporal rotation can restore straightness to the penis with no loss in phallic length; asymmetry; or erectile dysfunction. While a variety of surgical techniques are feasible for the correction of milder degrees of curvature; we believe that severe degrees should be spared the shortening and corrected by corporeal rotation..

Keywords :

Penile curvature; Deviation; Rotation; Shaeer; Corpora cavernosa.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Osama Kamal Zaki Shaeer**



Title : Implantation of Penile Prosthesis in Cases of Corporeal Fibrosis: Modified Shaeer's Excavation Technique

Authors: Osama Kamal Zaki Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: Implantation of penile prosthesis in case of corporeal fibrosis poses a greater risk of complications because of the blinded aggression involved. Penoscopic excavation and ultrasonography-guided excavation can decrease these complications but still have limitations.

Aim: This work described the combination of penoscopy-guided and ultrasound-guided excavation in a trial to eliminate the limitations inherent to both. Methods: Twelve patients with penile fibrosis were operated upon. A guide wire was inserted under ultrasound monitoring; along which penoscopic corporotomy and resection was performed. Ultrasound was also used to monitor penoscopic excavation toward the tip of the corpus cavernosum and crus.

Main Outcome Measures: Ease of the procedure; safety; extent of dilatation; and girth of prosthesis implanted. Results: The procedure was relatively easy. Ten cases were dilated up to size 13.5 Hegar; and two up to size 14. Size 13 prosthesis was implanted in all cases.

Conclusions: The relative safety of the procedure; the low incidence of complications; the possibility of restoring length and girth to an extent; and the resultant generous dilatation of the corpora for accommodating a sizable unhindered inflatable penile prosthesis all make ultrasound-guided penoscopic corporotomy and resection a valid option for prosthesis implantation in cases of penile fibrosis.

Keywords:

Prosthesis; Implant; Fibrosis; Infection; Penoscopy; Excavation.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Osama Kamal Zaki Shaeer**



Title : Management of Distal Extrusion of Penile Prosthesis: Partial Disassembly and Tip Reinforcement by Double Breasting or Grafting

Authors: Osama Kamal Zaki Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: Distal erosion and perforation of penile prosthesis have been reported in association with neurologic impairment; diabetes mellitus; and following irradiation for prostatic cancer. Once perforation occurs; reimplantation carries a higher risk of reperforation unless adequate preventive measures are taken.

Aim. This is a description of a procedure whereby the point of perforation was exposed and repaired to restore distal support.

Methods: In three patients with distal extrusion of penile prosthesis through the urethra; the glans was mobilized off the tip of the corpus cavernosum and the caverno-urethral fistula was disconnected from the corpus cavernosum. The fistula was sealed by primary sutures. The perforation on the corpus cavernosum side was sealed by double breasting in two cases and by grafting in one case. Prosthesis was reimplanted.

Main Outcome Measures: Complications; recurrence of erosion; and postoperative coital pain. Results: No complications; recurrence; or persistent pain occurred in any of the three cases.

Conclusion: The management of the distal extrusion of penile prosthesis by partial disassembly; double breasting; or grafting may provide reliable distal support and thereby avoid reperforation and repeated extrusion.

Keywords :

Extrusion; Erosion; Perforation; Penile Prosthesis; Penile Implant; Double Breasting.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Osama Kamal Zaki Shaeer



Title : Restoration of the Penis Following Amputation at Circumcision: Shaeer's A-Y Plasty

Authors: Osama Kamal Zaki Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: Male circumcision is one of the most commonly performed procedures worldwide. It has an estimated complication rate ranging from 0.1% to 35%. Amputation of the shaft is one of the most devastating complications reported; resulting from entrapment of the phallus between the blades of the clamp or from thermal injury due to the application of unipolar diathermy.

Aim: In this work; I describe the guidelines I adopted in the management of 32 male patients afflicted with amputation of the shaft of the penis upon circumcision.

Methods: "Shaeer's A-Y plasty" was performed for all patients; whereby the proximal corpora and crura were released from their attachment to the pubis and were advanced forward by inseting a specially configured fat flap into the resultant cavity. Skin grafts were used to cover the released penis.

Results: In all 32 cases; the released penis was within the normal range of penile length; and was cosmetically and functionally acceptable.

Conclusions: "Shaeer's A-Y plasty" is capable of restoring the native phallus following amputation; with preservation of both gender identity and physiological characteristics of the penis to a large extent.

Keywords :

Amputation; Lengthening; Elongation; Circumcision; Penis; Injury.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Osama Kamal Zaki Shaeer



Title : Torsion of the Penis in Adults: Prevalence and Surgical Correction

Authors: Osama Kamal Zaki Shaeer

Published In : Sexual Medicine

ISSN 1743 - 6095

Impact Factor 6.199

Abstract :

Introduction: Torsion of the penis is a condition where the penis rotates around its longitudinal axis; whether congenital or acquired. Extreme degrees may provoke a cosmetic complaint.

Aim: We describe surgical correction of congenital torsion of the penis in adults; and its prevalence among a special patient group.

Main Outcome Measures: Success and ease of surgical repair.

Methods: Sixteen cases with congenital torsion were operated upon; by counter-rotation; using a dartos flap in eight cases; and skin realignment in the other eight. The prevalence of congenital torsion was examined in 12,307 patients attending two andrology clinics.

Results: Full correction was achieved in all cases. Skin realignment was easier and faster than dartos flap; and was equally effective. Congenital torsion was present in 11.993% of the epidemiologic study group; mild in 80%; moderate in 15%; and severe in 5%. Only 2.2% was bothered by the condition.

Conclusion: Torsion of the penis is not uncommon but rarely provokes a complaint. Surgical repair by degloving and skin realignment is effective and easy. Dartos flap technique may be utilized if the former is inadequate.

Keywords:

Torsion; Penis; Dartos; Flap; Skin; Realignment .

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Rany Shamloul**



Title : After 15 Years; has the Time Come to Revise the Term “Erectile Dysfunction?”

Authors: Rany Shamloul

Published In : Sexual medicine

ISSN 1743 - 6109

Impact Factor 6.199

Abstract :

This letter is a call to all sexual medicine authorities; especially the International Society for Sexual Medicine standards committee to consider whether; after 15 years; it is time for the terminology of ED to be updated to reflect the advances in our understanding. In our opinion; it appears that the evolving field of sexual medicine needs to develop a new term and definition for one of its core diagnoses. The new definition should emphasize that the condition is due to the hypofunction of the erectile mechanism; and should indicate the importance of attaining a fully rigid erection. Thus; we propose a new term and definition to replace “erectile dysfunction”.

Keywords :

Erectile dysfunction; Erectile hypofunction; Terminology.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Rany Shamloul



Title : Telemetric Intracavernosal and Intraspongiosal Pressure Monitoring

Authors: Rany Shamloul

Published In : Sexual medicine

ISSN 1743 - 6109

Impact Factor 6.199

Abstract :

Introduction. Despite the major breakthroughs basic research in erectile physiology experienced in the last; most of the methods used for quantitative assessment of erectile function in longitudinal studies suffer many drawbacks.

Objective. This review will focus on radiotelemetric assessment of intracavernosal (ICP) and intraspongiosal (ISP) regarding the technique; data collection; interpretation; and overall benefits.

Results. Telemetric recording of ICP and ISP allows for qualitative and quantitative assessment of erectile responses in experimental animals; a characteristic that is not possible using other techniques. This technique has many advantages that can collectively lead to production of high quality data regarding erection. The system suffers two drawbacks; its high cost and the need for surgical implantation of the transmitter.

Conclusion. The use of telemetric monitoring of ICP and ISP carries many advantages that will; hopefully; establish this technique as the gold standard method for assessment of erectile responses in the near future.

Keywords :

Telemetry; Intracavernosal Pressure; Penile Erection.

Faculty of Medicine**Dep.** : Andrology and Sexology**Name** : **Rany Shamloul****Title** : Restoration of Female Genital Vasocongestive Arousal Responses in Young and Aged Rats**Authors:** Rochard K.S. Beharry, Taben M. Hale, Jeremy P.W. Heaton, Rany Shamloul, and Michael A. Adams**Published In** : Sexual medicine**ISSN**

1743 - 6109

Impact Factor

6.199

Abstract :

Introduction. Treatments of aged; male hypertensive rats that induce vascular remodeling or that normalize endothelial function are known to produce sustained improvements in erectile function. Whether the treatments targeting these processes benefit female genital vasocongestive arousal (GVA) responses is currently not known.

Aim. To determine whether the actions of nitric oxide (NO) are critical to the apomorphine (APO)-generated GVA responses in both intact and ovariectomized OVX young adult female rats (before any aging-associated decreases in the responses). In addition; we also investigated whether the diminished GVA responses in aged rats could be restored; at least in part; using an antihypertensive treatment; which is known to enhance erectile responses and improve general vascular function in male rats.

Methods. In female Wistar rats; APO-induced GVA responses (80 mg/kg; subcutaneously [sc]; 30 minutes) were assessed by videomonitoring following various treatments. Young adult females were ovariectomized or were treated with the nitric oxide synthase (NOS) inhibitor N-nitro-L-arginine methyl ester (30 mg/kg; iv); followed by an NO mimetic; sodium nitroprusside (10 mg/kg/minute; intravenous). Aged females (18 months) were treated for 2 weeks with the angiotensin converting enzyme (ACE) inhibitor; enalapril (30 mg/kg/day; orally) plus low sodium (0.04%). Main Outcome Measures. APO-induced GVA responses in female rats.

Results. There was an age-associated reduction in sexual responses in normotensive rats that was greatly enhanced (fourfold) by brief; aggressive antihypertensive treatment. The enhanced vasocongestive responses persisted for a 5-week off-treatment. Both OVX and NOS inhibition significantly decreased sexual responses by approximately 80% in young female rats. Systemic administration of an NO mimetic recovered vasocongestive responses in the NOS-blocked rats; but not in OVX animals.

Conclusions. Although mechanisms were not established; the major findings were that brief aggressive ACE inhibitor treatment markedly improved sexual responses in

female rats; and systemic delivery of an NO mimetic recovered sexual responses in globally NOS-blocked animals..

Keywords:

Female Sexual Responses; Apomorphine; Genital Vasocongestive Arousal.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Fine Needle Aspiration Vs. Mtese in Non-Obstructive Azoospermia

Authors: S.El-Haggar, T. Mostafa, T. Abdel Nasser, R.Hany and A. Abdel Hadi

Published In : Int Journal Androl

ISSN 0105 - 6263

Impact Factor 3.04

Abstract :

This study was carried out on 100 patients with non-obstructive azoospermia (NOA) to compare between results and complications of fine needle aspiration (FNA) vs. micro-dissection testicular sperm extraction (mTESE) sperm retrieval. They underwent history taking; clinical examination; semen analysis; serum follicle stimulating hormone estimation and scrotal Duplex. One testis was subjected to FNA screening whereas the other testis was subjected to mTESE and histopathology. Follow-up was by ultrasonography at 1; 3 and 6 months. The overall sperm retrieval rate was 54% by mTESE and 10% by FNA. Spermatozoa were retrieved by mTESE from all cases with hypospermatogenesis; severe hypospermatogenesis; 30% of Sertoli cell only (SCO); 16.7% of germ cell arrest and in 28.6% of tubular hyalinization. Sperms were retrieved by FNA in 33.3% of hypospermatogenesis; 9% in severe hypospermatogenesis; 5% in SCO; 16.7% in germ cell arrest; while no sperms were retrieved in the tubular hyalinization group. The total complication rate following mTESE was 10% in the early phase and none in the long-term follow-up compared to 24% of FNA side. It is concluded that mTESE is superior to FNA as regards sperm retrieval rate and lower incidence of complications in NOA patients.

Keywords :

Azoospermia; FNA; Male infertility; NOA; TESE; Testis.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Taymour Mostafa Ibrahim**



Title : Effect of Hemin and Carbon Monoxide Releasing Molecule (CORM-3) On cGMP in Rat Penile Tissue

Authors: M.T. Abdel Aziz, M.F. El-Asmar, T.Mostafa, H.Atta, H.H. Fouad, N.K. Roshdy, L.A. Rashed, E.A. Obaia, D.A. Sabry, A.T. Abdel Aziz, G. Drummond, and R. Olszanecki

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Introduction. Cyclic guanosine monophosphate (cGMP) levels can be regulated by heme oxygenase-1 and 2 (HO-1 and HO-2)-derived carbon monoxide (CO).

Aims. Assessment of the effect of upregulating CO in rat corpora cavernosa (CC) on the cavernous cGMP.

Methods. Three experimental groups were studied: first group (n = 40); short-term HO induction over 2 weeks by injection of intraperitoneal increasing doses of hemin; the second group (N = 40) was subjected to intracavernosal injection of CO donor; CORM-3; or its inactive form (iCORM-3) over 2 weeks; the third group (N = 60) was subdivided into three subgroups: the first one received a combined hemin and CORM-3; the second one received hemin and its inhibitor stannous mesoporphyrin (SnMP); and third one received a combined hemin; CORM-3; and SnMP.

Main Outcome Measures. In CC; HO-1 and HO-2 gene expression; Northern blot and Western blot; cGMP levels; and HO enzyme activity. Results. In the first group; maximum induction of HO-1 gene expression; HO enzyme activity; and cGMP occurred with 4-mg hemin dose with a successive increase over 2 weeks. In the second group; CORM-3 increased cGMP by twofold compared with iCORM-3; and also increased HO-1 protein. In the third group; SnMP inhibited the enhancing effect of CORM-3 and HO on erectile signaling molecules; i.e.; HO-1 gene; enzyme activity; and cGMP.

Conclusions. CORM-3- or hemin-mediated CO release could increase cavernous tissue cGMP.

Keywords :

Erectile dysfunction; HO-1; HO-2; Corpus cavernosum; NO; CO; CGMP.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Penile Fracture: Surgical Repair and Late Effects on Erectile Function

Authors: A. Ateyah, T. Mostafa, T. Abdel Nasser, O. Shaeer, A. Abdel Hadi, and M. Abd Al-Gabbar

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Introduction. Penile fracture is described as a traumatic rupture of the tunica albuginea because of blunt injury of an erect penis. Aim. To assess the etiology; treatment maneuvers; and late effects of penile fractures treated by surgical repair. Methods. Thirty-three patients diagnosed provisionally as having fractured penises. Thirty patients were managed by immediate surgical repair and three by delayed repair. Main Outcome Measures. International Index of Erectile Function-5 for married cases and Single-question Self-report of Erectile Dysfunction questionnaires and recording complications after 2; 3; and 6 months. Results. The most common cause of fracture penis is self-inflicted acute bending (54.5%). The tear was visualized by ultrasound in 20/30 patients (66.7%) mostly on the right proximal third of the penis. All tears were unilateral with mean length 2.0-0.9 cm (range 0.5-4 cm). All patients who completed their follow-up after 6 months (n = 24) were able to achieve an adequate erection except two married cases who felt mild erectile dysfunction. Penile nodules were the most common postoperative complication (41.7%) after 6 months' follow-up. Patients treated with immediate or delayed repair had comparable complications. Conclusions. Fracture penis is not uncommon as an emergency that must be repaired either immediately or delayed. Clinical diagnosis is more predictive than ultrasound in diagnosis and determining the site of the tear. Ultrasound may be of value in patients where there is clinical doubt.

Keywords:

Penile fracture; IIEF-5; Ultrasound; Tunica albuginea; Trauma.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : The Role of PDE5 Inhibitors in Heme Oxygenase-cGMP Relationship in Rat Cavernous Tissues

Authors: M.T. Abdel Aziz, M.F. El-Asmar, T. Mostafa, H. Atta, H.H. Fouad, N.K. Roshdy, L.A. Rashed, E.A. Obaia, D.A. Sabry, A.T. Abdel Aziz, G. Drummond and R. Olszanecki.

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Introduction. Heme oxygenase (HO) enzyme catalyzes oxidative degradation of heme to biliverdin and carbon monoxide (CO). CO shares many properties with nitric oxide (NO) including the activation of soluble guanyl cyclase.

Aim. To assess cavernous tissue HO activity and cyclic guanosine monophosphate (cGMP) levels in response to oral phosphodiesterase type 5 (PDE5) inhibitors.

Methods. Seven hundred twenty male Sprague-Dawley rats; divided into 6 groups; were investigated. Group 1; controls; group 2 received sildenafil citrate orally; group 3 received vardenafil hydrochloride; and group 4 received tadalafil. Group 5 was subdivided into three equal subgroups; received the same dose of each drug added to the HO inhibitor; Zn protoporphyrin. Group 6 was subdivided into 3 equal subgroups; received the same dose of each drug added to the NO inhibitor; L-nitroarginine methylester. Eight rats from each group/subgroup were sacrificed at 0.5; 1; 2; 3; 4; 6; 18; 24; and 36 h; respectively.

Main Outcome Measures. HO enzyme activity assay and cGMP tissue levels in dissected rat cavernous tissues. Results. Both cavernous tissue HO enzyme activity and cGMP levels were increased significantly in sildenafil; vardenafil-; and tadalafil-treated rats compared with controls; with significant decreases after either HO or NO inhibition. Cavernous tissue HO enzyme activity and cGMP showed a positive significant correlation ($r=0.854$; $P<0.001$).

Conclusion. The effects of PDE5 inhibitors in cavernous tissue are partly mediated through HO enzyme activity.

Keywords :

Heme oxygenase; CGMP; Sildenafil; Vardenafil; Tadalafil; PDE5 Inhibitors.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Taymour Mostafa Ibrahim**



Title : Couple Satisfaction to Different Therapeutic Modalities for Organic Erectile Dysfunction

Authors: A. Hassan, M. El-Hadidy, B.S. El-Deeck and T. Mostafa

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Aim. To test the subjective implications of satisfaction to various therapeutic modalities for pure or mixed organic ED; and to address changes in the health-oriented quality of life (QoL) and the relation of psychiatric status of these patients to treatment satisfaction.

Methods. A prospective study included of 354 couples classified according to their line of therapy into five treated groups: testosterone; sildenafil citrate; intracavernosal injection; external negative vacuum device; and penile prosthesis.

Main Outcome Measures. Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS) and the International Index of Erectile Function (IIEF). Satisfied patients were compared to unsatisfied cases using the PCASEE scale for QoL and Middlesex Hospital Questionnaire (MHQ) for psychiatric status.

Results. Sildenafil citrate-treated group represented the highest mean value of satisfaction score on EDITS; erectile function; orgasmic function; and overall satisfaction domains of IIEF. Penile implants-treated group was the second for satisfaction score on EDITS. The testosterone-treated group represented the highest mean value for sexual desire domain score of IIEF. Low scores in various domains of QoL were significantly improved among satisfied cases more than unsatisfied subjects after therapy. High association was found between dissatisfaction and scores for anxiety; obsession; and phobia; followed by scores of depression and somatic concomitant of anxiety.

Conclusion. ED is best conceived as intermingle of somatic; lifestyle; psychological; and partner relationship determinants. This should be taken into account to increase sexual satisfaction with improved QoL; and not only to produce rigid erection.

Keywords :

Erectile dysfunction; Sildenafil citrate; ICI; IIEF; Therapy; Testosterone.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Delayed Surgical Repair of Penile Fracture Under Local Anesthesia

Authors: T. Abdel Nasser and T. Mostafa

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Introduction. Penile fracture is a traumatic rupture of the tunica albuginea because of blunt injury of an erect penis.

Aim. To assess the efficacy of a simple delayed surgical repair of penile fracture after a conservative treatment under local anesthesia in patients presented after 24 hours.

Methods. Twenty-four patients with penile fracture presented after 24 hours were subjected to history taking; clinical examination; urine analysis; and penile ultrasound. They underwent conservative treatment for 7-12 days; and then a surgical repair under local anesthesia was carried out.

Main Outcome Measures. A follow-up for 6 months for sexual activity and any associated complaints in addition to local examination.

Results. All cases were presented with unilateral single tear; and the main cause of penile fracture was sexual intercourse. No intraoperative or postoperative complications were encountered. They regained their sexual activity 4–6 weeks after the repair. One case developed a mild deviation that did not interfere with sexual relation after the 6-month follow-up.

Conclusion. Surgical repair of penile fracture after a conservative treatment is an effective method for patients with delayed presentation devoid of urethral involvement.

Keywords :

Penile fracture; Ultrasound; Tunica albuginea; Trauma; Emergency.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Oral Phosphodiesterase Type 5 Inhibitors: Nonerectogenic Beneficial Uses

Authors: T. Mostafa

Published In : Journal of Sex Medicine

ISSN 1743 - 6095

Impact Factor 6.119

Abstract :

Introduction: Phosphodiesterase type 5 (PDE5) hydrolyses cyclic guanylate monophosphate (cGMP) specifically to 5' GMP. PDE5 inhibitors were a breakthrough medication that addressed a previously unfulfilled medical need. They promoted vascular relaxation in the corpora cavernosa and penile erection during sexual stimulation. Sildenafil; vardenafil; and tadalafil were approved then introduced as effective treatments for male erectile dysfunction. This impact has stimulated academic; clinical; and industrial research.

Aim: To highlight the nonerectogenic beneficial uses of oral PDE5 inhibitors. Method. A systematic review of published studies in this affair based on a Pubmed and medical subject heading databases search of all concerned articles.

Main Outcome Measures: Demonstrated beneficial as well as applicable uses of oral PDE5 inhibitors.

Results: As chemical molecules; these drugs were shown to exert potential nonerectogenic beneficial effects. They showed efficacy as a useful adjunct in the management of pulmonary hypertension. Additional uses were extended to different utilities: essential hypertension; benign prostatic hyperplasia; gastrointestinal disorders; endothelial dysfunction; female sexual dysfunction; genital blood flow; exercise capacity; Raynaud's phenomenon; sperm motility; etc.

Conclusion: Exploring PDE5 inhibitors for their possible medical applications in diverse specialties seems to be beneficial in making use of these molecules for the welfare of humanity.

Keywords:

PDE5 Inhibitors; Sildenafil; Tadalafil; Vardenafil.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Triorchidism: A Case Report and Review of Similar Conditions

Authors: A. Hassan, S. El-Mogy and T. Mostafa

Published In : Andrologia

ISSN 0303 - 4569

Impact Factor 0.939

Abstract :

Polyorchidism is a rare anomaly; defined as the presence of more than two testicles with about 100 cases reported in the literature. The majority of cases were triorchidism with occasional bilateral duplication. We report the case of a 32-year-old man with polyorchidism; presenting with primary infertility with oligoasthenoteratozoospermia semen profile. Scrotal examination revealed two discrete ovoid nontender; firm; mobile lumps with testicular sensation in the right side of the scrotum. Ultrasonography and magnetic resonance imaging confirmed the presence of double testes with double separate epididymides sharing a common vas deferens in the right side of the scrotum. It demonstrated similar echo texture and vascular flow in both right-sided testicles although smaller in size than the left testis. The case was managed conservatively without surgical intervention with follow-up. Tracing of similar conditions in the literature was discussed.

Keywords:

Congenital anomalies; Magnetic resonance imaging; Polyorchidism; Testis; Ultrasonography.

Faculty of Medicine**Dep.** : Andrology and Sexology**Name** : **Taymour Mostafa Ibrahim****Title** : Heme Oxygenase Enzyme Activity in Human Seminal Plasma of Fertile and Infertile Males**Authors:** M.T. Abdel Aziz, T. Mostafa, N. Roshdy, H. Hosni, L. Rashed, D. Sabry, T. Abdel Nasser, O. Abdel Azim and O. Abdel Gawad.**Published In** : Andrologia**ISSN** 0303 - 4569**Impact Factor** 0.939**Abstract :**

This work aimed to assess heme oxygenase (HO) enzyme activity relationship with different human semen parameters. One hundred and twenty men were divided according to their sperm count and clinical examination into: obstructive azoospermia (n = 20); nonobstructive azoospermia (NOA) (n = 25); oligozoospermia (n = 35) and normozoospermia (n = 40). Semen analysis; western blot for HO-1 and HO-2; and estimation of seminal plasma HO enzyme activity chemically in the form of bilirubin concentration were carried out. Seminal plasma HO enzyme activity was very low in OA specimens; low in NOA; moderate in oligozoospermia while higher in normozoospermia (mean \pm SD; 6.26 ± 2.2 ; 81.4 ± 35.5 ; 283.8 ± 90.1 ; 657.4 ± 227.6 pmol ml⁻¹ min⁻¹) with significant differences. Western blot analysis demonstrated HO-2 expression in all studied groups whereas HO-1 was highly expressed in fertile normozoospermic group compared with other groups. There was positive correlation between seminal plasma HO enzyme activity and sperm concentration; sperm motility percentage; motile spermatozoa ml⁻¹ and sperm normal morphology per cent. It is concluded that HO enzyme activity in the human seminal plasma is related to spermatogenesis and sperm-motility processes.

Keywords :

Azoospermia; Heme oxygenase; Male infertility; Semen; Seminal plasma.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Sperm Disomy in Idiopathic Severely Oligoasthenoteratozoospermic Males

Authors: M. N. Moemen, T. Mostafa, A.M. Gadalla, M. Abbas, H. F. Ismail, M. F. Abd El-Hamid and M. F. Abdel Salam

Published In : Andrologia

ISSN 0303 - 4569

Impact Factor 0.939

Abstract :

This work aimed to determine the incidence of sperm disomy in infertile men with idiopathic severe oligoasthenoteratozoospermia (OAT). Fifty male subjects were included in this study: 30 infertile men with idiopathic severe OAT and 20 healthy fertile men as controls. Semen analysis; hormonal assay (folliclestimulating hormone; luteinising hormone and testosterone); scrotal ultrasound examination and fluorescent in situ hybridisation of their semen samples were performed to determine the disomy levels of chromosomes X and Y. There was a significant higher frequency for XX disomy and XY disomy in spermatozoa from severe OAT patients than that in controls. There was nonsignificant difference in the percentage of YY disomy between OAT cases and controls. XX; YY and XY disomy showed nonsignificant correlation with the age. Sperm concentration and sperm motility demonstrated significant negative correlation with XX and XY disomy. Sperm abnormal forms had significant negative correlation with XX and XY disomy. Nonsignificant correlation was demonstrated between YY disomy and semen parameters. XX disomy showed significant positive correlation with XY disomy and nonsignificant correlation with YY disomy. YY disomy showed nonsignificant correlation with XY disomy. It is concluded that sperm disomy in severe OAT is increased; which should be taken into account when undergoing micromanipulation.

Keywords :

Chromosomes; FISH; Male infertility; Semen; Spermatozoa.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : **Taymour Mostafa Ibrahim**



Title : Follicle-Stimulating Hormone Receptor Polymorphism and Seminal Anti-Müllerian Hormone in Fertile and Infertile Mens

Authors: A. A. Zalata, A.H. Hassan, H. A. Nada, F. M. Bragais, A. Agarwal and T. Mostafa

Published In : Andrologia

ISSN 0303 - 4569

Impact Factor 0.939

Abstract :

Follicle-stimulating hormone (FSH) is fundamental for Sertoli cell function stimulating spermatogenesis and follicular growth by a specific receptor (FSHR). This work aimed to investigate the occurrence of Asn and Ser FSHR gene variants and its relationship with seminal anti-Müllerian hormone (AMH) among normozoospermic and infertile oligoasthenozoospermic (OAT) males. Eighty-two Caucasian males grouped into normozoospermic healthy controls (n = 30) and infertile OAT males (n = 52). FSHR gene variants were determined by DNA from anti-coagulated blood and underwent polymerase chain reaction (PCR) amplification and electrophoresis in detecting amplification products. AMH in seminal plasma was determined by ELISA. The results showed that the frequency of FSHR gene variants among fertile men was 46.7% Asn/Asn (N680S); 33.3% Asn/Ser; and 20% Ser/Ser; whereas among OAT men were 34.6%; 38.5% and 26.9% respectively with nonsignificant differences. Seminal AMH was significantly higher in fertile than infertile OAT men. There was significant increase in seminal AMH with Asn/Asn variant of FSHR gene than those with Asn/Ser or Ser/Ser. It is concluded that FSH gene variants showed no difference in distribution between fertile or infertile OAT men. However; when correlated with seminal AMH values; there was an increase in Asn/Asn in men with high seminal AMH.

Keywords :

Anti-Müllerian hormone; FSH Receptors; Male infertility; Polymorphism; Semen.

Faculty of Medicine**Dep. :** Andrology and Sexology**Name :** Taymour Mostafa Ibrahim**Title :** Yohimbine Enhances the Effect of Sildenafil on Erectile Process in Rats**Authors:** A.M Senbel and T. Mostafa**Published In :** Int. Journal Impot Res.**ISSN** 0955 - 9930**Impact Factor** 2.059**Abstract :**

Combining the centrally acting drug yohimbine with the peripheral conditioner sildenafil might be an approach to erectile dysfunction cases in which sildenafil alone failed. This work aimed to investigate the effect of yohimbine on sildenafil-induced facilitation of erectile process. Erectile responses to electrical stimulation of the cavernous nerve in anesthetized male rats were recorded. Intracavernosal pressure/systemic arterial pressure (ICP/SAP) was calculated; 1 and 5 min after IV sildenafil; yohimbine or a combination of both. Changes in sexual arousal and copulatory performance indices were compared before and after these injections using behavioral mating experiments. It was shown that systemic administration of sildenafil produced a significant increase in ICP/SAP than control at doses $-10 \mu\text{mol kg}^{-1}$. Yohimbine alone failed to potentiate erectile responses but yohimbine ($\mu\text{mol kg}^{-1}$) significantly potentiated the effect of sildenafil $1-10 \mu\text{mol kg}^{-1}$ and 1mmol kg^{-1} ; 1 and 5min after injection. Potentiation of ICP/SAP induced by their combination was greater than the sum of the effects of the corresponding doses of either drug at the same time interval. A nonsignificant additional decrease in SAP than sildenafil induced was observed if administered with yohimbine .

Addition of sildenafil to yohimbine significantly enhanced the effect of the latter on intromission frequency; intercopulatory interval and the number of ejaculations per session. It is concluded that yohimbine may enhance and prolong the effect of sildenafil on erectile process without additional hypotension. Sildenafil may enhance the central effects of yohimbine on erection; it amplifies the effect of yohimbine on male copulatory performance but not on sexual motivation. The potential beneficial effect of the combination was found to be more pronounced on the central component than on the peripheral component of the erectile process.

Keywords:

Erectile dysfunction; Sildenafil; yohimbine; Phosphodiesterase Inhibitor; Corpus cavernosum.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Oral Phosphodiesterase-5 Inhibitors and Sperm Functions

Authors: T. Mostafa

Published In : Int. Journal of Impot Res.

ISSN 0955 - 9930

Impact Factor 2.059

Abstract :

This review aims to elucidate the possible effects of phosphodiesterase-5 (PDE5) inhibitors on sperm functions. PDEs hydrolyze cyclic nucleotides; and together with adenylyl and guanylyl cyclase; which catalyze the formation of cAMP and CGMP; regulate the levels of these second messengers in cells. cGMP-specific PDE5 is one of the PDEs that have been intensively studied because of its fundamental pharmacological relevance; as oral PDE5 inhibitors are used successfully in treating erectile dysfunction. In addition; they have shown diverse beneficial actions in different disease categories. Specific relevance of the cGMP system in reproductive functions has been recently proposed. Its use was shown to be devoid of effects on semen volume; concentration; sperm membrane integrity or sperm penetration assay. Most available studies demonstrated a significant increase in sperm motility and viability both in vivo and in vitro; which seems to be enhanced at low doses and reduced at high concentrations. Also; these molecules showed a role in capacitation and a debated one concerning acrosome reaction. However; due to the relative short period since the launching of oral PDE5 inhibitors; more investigations should be carried out in wider scales to assess their effect(s) on variant sperm function that could be beneficial as potential therapeutic approaches.

Keywords :

Phosphodiesterase-5 Inhibitors; Semen; Spermatozoa; Sildenafil; Tadalafil; Vardenafil.

Faculty of Medicine

Dep. : Andrology and Sexology

Name : Taymour Mostafa Ibrahim



Title : Human Testicular Arterial Supply: Gross Anatomy; Corrosion Cast; and Radiologic Study

Authors: T. Mostafa, I. Labib, Y. El-Khayat, A. El-Shahat and A. Gadallah

Published In : Fertil Steril

ISSN 0015 - 0282

Impact Factor 3.168

Abstract :

Objective: To study human testicular arterial supply .

Design: Prospective.

Setting: Academic setting.

Patient(s): Forty fresh male cadavers.

Intervention(s): Gross anatomy of 20 cadavers; corrosion casting of 10; and radiography of 10.

Main Outcome Measure(s): Testicular vascular supply; course; branching; and anastomosis.

Result(s): The testicular artery descends bilaterally in a straight course (85%) and in a convoluted course (15%). There were three sites of terminations: along the upper pole of the mediastinum testis (78.8%); giving terminal branches (16.2%) or descends without division (5%). Four patterns of termination were found; but in the majority (69.7%) it terminates as upper and lower polar branches. The cremasteric artery arises from the inferior epigastric artery and terminates close to the lower end of the testis; anastomosing with the lower polar branch of the testicular artery. The artery of the vas arises from the inferior vesical artery; terminates by several capsular branches close to the mediastinum testis; anastomosing with branches of the testicular artery along the mediastinum testis.

Conclusion(s): The testis gets its arterial supply mainly from the testicular artery supplemented with the cremastic artery and the artery of the vas. The testis has rich vascular areas in the upper polar; mediastinum testis; and posterolateral segments.

Keywords:

Testis; Testicular artery; Corrosion cast; Cremasteric artery; Anatomy.

Faculty of Medicine

Dep. : Anesthesia

Name : Ahmed Mohamed Mukhtar



Title : Esophageal Doppler Monitor: A new Tool in Monitoring Video Assisted Thoracoscopic Surgery for ligation of Patent Ductus Arteriosus

Authors: Ahmed M. Mukhtar and Gihan M. Obayah

Published In : Anesthesia and Analgesia

ISSN 0003 - 2999

Impact Factor 2.214

Abstract :

Video assisted thoracoscopic surgery VATS has become the standard approach for patent ductus arteriosus PDA closure in many centers. Although this technique has many advantages; it carries a risk of residual ductal shunting. Because incomplete PDA ligation may necessitate reoperation or a need for lifelong infection prophylaxis; it is important to identify patients with residual ductal flow. Several authors have reported the usefulness of transesophageal echocardiography (TEE) to evaluate residual ductal patency. However TEE examinations in children requires an echocardiographic specialist and may not be available in some centers. Instead of TEE we used esophageal Doppler monitor (EDM) to examine the ductal flow pattern.

Keywords :

Esophageal Doppler; Video Assisted Thoracoscopy.

Faculty of Medicine**Dep. :** Anesthesia**Name :** Ahmed Mohamed Mukhtar**Title :** Therapeutic Potentials of Intraoperative Hypercapnia During Video Assisted Thoracoscopy in pediatrics**Authors:** Ahmed M. Mukhtar, Gihan M. Obayah, Ashraf Elmasry and Nabil M. Dessouky**Published In :** Anesthesia and Analgesia**ISSN** 0003 - 2999**Impact Factor** 2.214**Abstract :**

Although the cardiovascular effect of CO₂ insufflation had never been previously reported in pediatric thoracoscopy; several clinical trials demonstrated significant hemodynamic deterioration in adults. The present study sought to investigate the concept of therapeutic hypercapnia to counteract the hemodynamic effect of induced capnothorax. Twelve pediatric patients underwent Video Assisted Thoracoscopic VATS patent ductus arteriosus closure were enrolled in the study. Cardio-respiratory variables were determined during baseline T1; after carbon dioxide insufflation at pressures of 2mmHg T2; 4mmHg T3; 6 mmHg T4; 8 mmHg T5; and 10mmHg T6. CO₂ insufflation was not associated with adverse hemodynamic effects. Cardiac output CO as well as central venous oxygen saturation Scvo₂ increased progressively throughout the study protocol. Relative to baseline Peak velocity PV; systolic flow time FTc; heart rate; and central venous pressure increased significantly during insufflation; but systolic and diastolic blood pressure remained unchanged. Arterial carbon dioxide increased from 40.7 ± 3 at T1 to 61 ± 1.6 at T6 mmHg. Arterial oxygen tension PaO₂ increased from 170.9 ± 3.3 at T1 to 182 ± 2 at T6. arterial PH decreased from 7.31 ± 1.2 at T1 to 7.14 ± 4.6 at T6. In conclusion: Hypercapnia targeting CO₂ 50-70 mmHg was associated with increased cardiac output; Scvo₂; and PaO₂ in patients undergoing VATS PDA closure using one lung ventilation without any deleterious cardiopulmonary effects.

Keywords:

Anesthesia; Hypercapnia; Video-assisted thoracoscopy; Patent ductus arteriosus.

Faculty of Medicine**Dep. :** Anesthesia**Name :** Hala Mostafa Goma Mohammed**Title :** S (+) Ketamine Suppresses TNF-(; IL-6 and IL-8 Production in Blood in Major Abdominal Surgery Under Combined epidural-General Anesthesia**Authors:** Hala Mostafa, Amr Mohamad Abo Ela and Nagwa El-Tweel**Published In :** Pakistan Journal of Medical Science (JMC)**ISSN** 1682 - 4474**Impact Factor****Abstract :**

Cytokines are essential for hematopoiesis and immune responses; and they play a key role in the defense against infection. It has been demonstrated that proinflammatory cytokines such as (TNF-); interleukin (IL) 6 and IL-8 increase in patients with trauma; surgical trauma; sepsis burns. The previous study reported that S (+) ketamine suppressed TNF-(production IL-6; IL-8. The previous study reported that a single S(+) ketamine preincision dose decreased IL-6 to 550 ± 20 at 30 minutes before end of operation while the repeated 20 minutes doses decreased IL-6 to 440 ± 20 minutes. IL-8 when single dose of S (+) ketamine was given decreased to 850 ± 50 at 30 minutes before end of the operation; while after repeated S (+) ketamine it was 600 ± 40 at 30 minutes before operation; about TNF-(. It decreased to reach 1110 ± 180 in a single dose of S (+) ketamine while it decreased to 1000 ± 120 in repeated dose of S (+) ketamine. The total dose of S (+) ketamine was 35 ± 30 in single dose group; while it was 80 ± 40 in repeated dose group; the dose of ropivacaine given epidurally was 148 ± 20 in single group while it was 130 ± 15 in repeated group. This means the anesthetics required in repeated doses of S (+) group was lower; indicated that S (+) ketamine decreased the anesthetics requirement. The conclusion that S (+) ketamine directly suppresses proinflammatory cytokines production when given in repeated doses; it also decreased the ropivacaine dose needed more in repeated doses of S (+) ketamine. A larger study is also needed to assess whether the favorable postoperative effect of S (+) ketamine makes a difference in clinical outcomes such as time to ambulation; resumption of dietary intake discharge from hospital; and cost/benefit when S(+) ketamine is used.

Keywords :

SKetamine; Cytokines; Interleukines 6 and 8; Major abdominal surgery.

Faculty of Medicine

Dep. : Anesthesia

Name : Hala Mostafa Goma Mohammed



Title : Randomized Double Blind Comparison Between Sciatic-Femoral Nerve Block and Propofol-Remifentanil; Propofol -Alfentanil General Anesthetics in Out-Patient Knee Arthroscopy.

Authors: Hala Mostafa, Hosam El -Shamaa, Nesrine El Refaai and Ahmed -EL Akati

Published In : Pakistan Journal of Biological Science

ISSN 1028 - 8880

Impact Factor

Abstract :

Objectives and background: The aim of this study is the evaluation preparation and discharge times as well as the side-effects; patient satisfaction and costs after out-patient knee arthroscopy performed with a combined sciatic-femoral nerve block or a propofol-remifentanil; propofol -alfentanil general anesthetics.

Methodology: The study included 60 patients; (remifentanil group I; n = 20); (alfentanil group II; n = 20); and; a combined sciatic-femoral nerve block (PNB group III; n = 20).); In group I; anesthesia was induced with remifentanil; In group II alfentanil patients received a sciatic-femoral nerve block with ropivacaine 25 mL 0.75 using a multiple injection technique aided by a nerve stimulator)- and a short; bevelled; Teflon®-coated stimulating needle (stimulation frequency 2 Hz; stimulation intensity 1 mA; which was gradually decreased to 0.5 mA).

Results: There was no significant difference in the duration of stay in the post anesthesia care unit and day surgery unit between groups; there was significant increase in the time to first urination in PNB group than the other two groups. Also there was no significant difference in the stay in delay surgery. The Cost of disposal materials; preoperative; and post operative times were higher in PNB group.

The Cost of drugs was higher in remifentanil and alfentanil groups than PNB group; the total cost was insignificant in the three groups. Times to spontaneous and adequate spontaneous respiration; The times until the patients could sit unaided and ambulate; and the time until PADS > 9 were similar between groups .

Conclusion: In conclusion; this prospective randomized study suggests that in patients undergoing out-patient arthroscopy; a combined sciatic-femoral nerve block (using a small volume of ropivacaine 0.75%) compared with a propofol- remifentanil or propofol-alfentanil general anesthetics techniques may provide similar intraoperative analgesic efficacy; a shorter length of stay in the PACU and an increased likelihood of bypassing the first phase of postoperative recovery. The advantages of sciatic-femoral

blockade as a sole anesthetic technique include avoidance of general anesthesia; avoidance of neuraxial blockade; minimization of hemodynamic effects; and provision of long-lasting postoperative analgesia.

The evaluation of anaesthesia-related costs; though of interest; is difficult and requires methodological improvement.

Keywords:

Combined sciatic-femoral nerve block; Remifentanyl; Alfentanil (GA).

Faculty of Medicine

Dep. : Anesthesia

Name : Hala Mostafa Goma Mohammed



Title : Study of the Newborn Feeding Behaviors and Fentanyl Concentration in Colostrum after an Analgesic Dose of Epidural and Intravenous Fentanyl in Cesarean Section

Authors: Hala M. Goma, Reem N. Said and Amr M. El-Ela

Published In : Saudi Medical Journal

ISSN 0379 - 5284

Impact Factor 0.300

Abstract :

Objective: To compare the effects of epidural and intravenous fentanyl on breast feeding behaviors and fentanyl concentration in the colostrum after an analgesic dose .

Methods: This study was conducted at the Obstetrics Department of Kasr El-Aini Hospital-Cairo University; Cairo; Egypt. The studied mothers were 100 multipara; who have been subjected to cesarean section; and have a previous history of successful breast feeding. The study was conducted from May 2005 to May 2007. They were divided into 2 groups: group I included 50 patients who received epidural anesthesia with fentanyl; and group II included 50 patients who received spinal anesthesia with intravenous fentanyl; and both groups were observed for initial breast feeding behaviors of newborns; and fentanyl concentration in the colostrum at 45 minutes; and 24 hours after birth.

Results: The study included 100 multipara; 2 samples of colostrum were taken from each patients at 45 minutes; and at 24 hours. The levels of fentanyl concentration were greatest at 45 minutes of the initial sampling time; reaching 0.40 ± 0.059 ng/ml in the epidural group; and 0.19 ± 0.019 ng/ml in intravenous fentanyl group. There was no statistical difference in breast feeding behaviors at birth; or at 24 hours of in both groups.

Conclusion: Although the levels of fentanyl concentration were greatest at 45 minutes of the initial sampling time; it can be used safely as intravenous or epidural without affecting the initial breast feeding behaviors of the newborn.

Keywords:

Breast feeding; Epidural fentanyl; Intravenous; Caesarean section.

Faculty of Medicine

Dep. : Chest Diseases

Name : Ahmed Al Halfawy



Title : Safety and Efficacy of Using a Surgivac Pump for the Drainage of Chronic Indwelling Pleural Catheters in Malignant Pleural Effusions

Authors: Ahmed Al Halfawy and Richard Light

Published In : Respiriology

ISSN 1323 - 7799

Impact Factor 1.847

Abstract :

Background and objective: This descriptive study assessed whether a reusable commercially available surgivac pump was a safe and affordable method for draining chronic malignant pleural effusions with an indwelling pleural catheter.

Methods: Patients who were managed as outpatients using this technique were recruited over a 5-year period in Cairo; Egypt. The indwelling pleural catheters were inserted under local anaesthesia in a bronchoscopy suite. Patients were instructed by a trained nurse on how to drain the catheter using the surgivac pump.

Results: Fifty-five patients were included in the study. Successful pleurodesis was achieved in 42 (76.3%) over a mean period of drainage of 19.1 days (range 12–59 days). In all patients; the surgivac pump was successful in draining their pleural fluid and there were no complications related to the device itself.

Conclusion: The use of a surgivac pump to drain malignant effusions via a chronic indwelling pleural catheter is safe and results in a pleurodesis comparable to the more commonly used negative pressure containers (vacuum bottles).

Keywords:

Indwelling catheter; Lung cancer; Malignant pleural effusions; Pleurx; Surgivac.

Faculty of Medicine**Dep. :** Chest Diseases**Name :** Ahmed Al Halfawy**Title :** Survey of Adult Flexible Bronchoscopy Practice in Cairo**Authors:** Madkour Ashraf, Al-Halfawy Ahmed, Sharkawy Samar and Zakzouk Zeinab**Published In :** Bronchology**ISSN** 1070 - 8030**Impact Factor****Abstract :**

Data regarding the standards of bronchoscopic practice in Cairo hospitals; where the main bulk of the procedures in Egypt takes place; are lacking and have not been studied. A questionnaire-based survey was conducted aiming to assess the present status of performing flexible bronchoscopy (FB) and the extent of variations in chest physicians practice. All bronchoscopists performing FB were identified. A questionnaire consisting of 50 questions covering different aspects of bronchoscopy practice was distributed. Seventy-five bronchoscopists out of 87 (86%) returned the questionnaire and they had performed a total of 5994 bronchoscopies in the preceding year. The majority of practice is limited only to around 55% of bronchoscopists. The responders sometimes (20%) or never (3%) take proper precautions while performing FB in suspected airborne infections. Only 15% of bronchoscopists obtained a signed patient consent before bronchoscopy. Fifty-three (75%) of bronchoscopists gave benzodiazepine sedation and only 30 (42%) record availability of sedative antagonists. Sixty-six (88%) responders prescribed atropine. All bronchoscopies were performed under topical lidocaine.

Seventy-six percent of physicians monitored oximetry and 15% never monitored oximetry during the procedures. Marked variance was noted in sampling routines of suspected tumors. Only 21 (28%) and 47 (63%) of responders had performed transbronchial needle aspiration or lung biopsy over the preceding year; respectively. The mortality rate of FB was 0.01% with a 3% incidence of complications. We concluded from the presented data that bronchoscopic practice in Cairo is not standardized; and there is a need for national database; guidelines; and training programs for bronchoscopy practice.

Keywords :

Fiberoptic bronchoscopy; Cairo- Survey; Practice.

Faculty of Medicine**Dep. :** Clinical Pathology**Name :** **Hebatallah Mohamed Nabil Abdel-Razik****Title :** Mesenchymal Stem Cells Inhibit Natural Killer–Cell Proliferation; Cytotoxicity; and Cytokine Production: Role of Indoleamine 2,3-Dioxygenase And Prostaglandin E2**Authors:** Heba Abdelrazik**Published In :** Blood Journal**ISSN** 0006 - 4971**Impact Factor** 10.89**Abstract :**

Recently; a number of clinical trials employed either mesenchymal stem cells (MSCs) or natural killer (NK) cells in an attempt to improve the effectiveness of hematopoietic stem cell transplantation (HSCT). In view of the relevant role of both MSC and NK cells in HSCT; we have recently explored the result of possible interactions between the two cell types. We found that activated NK cells could kill MSCs whereas MSCs strongly inhibited IL-2-induced NK cell proliferation. In this study we further analyzed the inhibitory effect exerted by MSCs on NK cells. We show that MSCs not only inhibit the cytokine-induced proliferation of freshly isolated NK cells but also prevent the induction of effector functions such as cytotoxic activity and cytokine production. Moreover; we show that this inhibitory effect is related to a sharp down-regulation of the surface expression of the activating NK receptors NKp30; NKp44 and NKG2D. Finally; we demonstrate that indoleamine 2,3-dioxygenase and prostaglandin E2 represent key mediators of the MSC-induced inhibition of NK cells. These results may suggest the need of infusing MSCs and NK cells at different time intervals in novel HSCT-associated strategies of adoptive immunotherapy.

Keywords :

Mesenchymal stem cells; NK cells; PGE2; IDO.

Faculty of Medicine

Dep. : Dermatology

Name : Akmal Saad Hassan



Title : Toll Like Receptor 2 Is Highly Expressed in Lesions of Acne Inversa and Colocalizes With C-Type Lectin Receptor

Authors: R.E. Hunger, A.M. Surovy, A.S. Hassan, L.R. Braathen and N. Yawalkar.

Published In : British journal of Dermatology

ISSN 0007 - 0963

Impact Factor 3.503

Abstract :

Background: Acne inversa (hidradenitis suppurativa) is a chronic inflammatory and cicatricial disorder that affects skin areas rich in apocrine glands and terminal hairs; such as perineum and axillae. The exact pathogenesis of the disease is not well understood and the mechanisms by which bacterial superinfection contributes to the disease progression are not clear. Toll-like receptors (TLRs) expressed by inflammatory cells play a crucial role in the innate immune response to bacteria.

Objectives: We sought to investigate the role of TLR2 in the pathogenesis of acne inversa. **Methods:** We investigated the expression of TLR2 using real-time polymerase chain reaction analysis and immunohistochemical stainings of tissue samples from patients with acne inversa. Furthermore; we phenotypically characterized the infiltrating cells and their expression of TLR2.

Results: Compared with normal skin; a highly increased in situ expression of TLR2 in acne inversa skin lesions was found at both the mRNA and the protein level. The most abundant cells in the dermal infiltrate of acne inversa were CD68+ macrophages; CD209+ dendritic cells (DCs) and CD3+ T cells. CD19+ B cells and CD56+ natural killer cells were found only in small numbers.

Double staining with fluorescence-labelled antibodies showed that TLR2 was expressed by infiltrating macrophages (CD68+) and DCs (CD209+). Flow cytometric analysis of isolated infiltrating cells further confirmed surface expression of TLR2 by macrophages and DCs.

Conclusions: These data indicate that the enhanced expression of TLR2 by infiltrating macrophages and DCs may contribute to the pathogenesis of inflammatory lesions of acne inversa.

Keywords :

Acne inversa;Toll-like receptor-2; Dendritic cells.

Faculty of Medicine

Dep. : Dermatology

Name : Marwa Mohsen Tolba Fawzi



Title : Expression of Insulin-Like Growth Factor-I in Lesional and Non-Lesional Skin of Patients with Morphea

Authors: M.M.T. Fawzi, S.O. Tawfik, A.M. Eissa, M.H.M. El-Komy, M.R.E. Abdel-Halim and O.G. Shaker

Published In : British Journal of Dermatology

ISSN 0007 - 0963

Impact Factor 3.503

Abstract :

Background: Morphea (scleroderma) is a chronic disorder characterized by circumscribed sclerotic plaques with a hallmark of increased fibroblast activation and fibrosis. Through its effect on connective tissue cells and immune cells; IGF-I was found to play a role in some autoimmune connective tissue diseases and was implicated in the pathogenesis of several fibrotic disorders.

Objective: The aim of this work was to evaluate the role of IGF-I in the pathogenesis of morphea. **Subjects and Methods:** The study was carried out on 15 morphea patients and nine healthy controls. 2 (5mm) punch skin biopsies were taken from every patient (one from lesional and one from non-lesional skin) and a single biopsy was taken from the normal skin of each control. A 10cc blood sample was also taken from each patient and control. Quantitative detection of tissue and serum level of IGF-1 was done using ELISA technique.

Results: IGF-1 in lesional skin was significantly higher than in non-lesional and control skin (P values =0.001; 0.021 respectively). Moreover; a significantly higher level of IGF-1 was detected in patients' serum when compared to controls' serum (P value - 0.001) . A direct significant correlation existed between lesional and non-lesional skin level (r=0.618; P value= 0.014); and between lesional skin level and Rodnan score (r=0.538; P value=0.039). **Limitations:** Small sample size.

Conclusion: This study suggests that IGF-I plays an important role in the pathogenesis of fibrosis; characteristic of morphea. Studies on larger number of morphea cases as well as on cases of systemic sclerosis are recommended. Furthermore; therapeutic trials using IGF-I antagonist (octreotide) are highly recommended in cases of morphea.

Keywords :

Morphea; Scleroderma; Sclerosis; IGF-I; Growth factors.

Faculty of Medicine

Dep. : Dermatology

Name : Medhat El Mofty



Title : A Comparative Study of Different Treatment Frequencies of Psoralen and Ultraviolet A in Psoriatic Patients with Darker Skin Types

Authors: Medhat El Mofty, Hany El Weshahy, Randa Yousef, Mona R. E. Abdel-Halim, Heba Mashaly and Marwa El Hawa

Published In : Photodermatology; Photoimmunology and Photomedicine

ISSN 0905 - 4383

Impact Factor 1.081

Abstract :

Background: Photochemotherapy (PUVA) is a viable option for treatment of psoriasis. However; concerns about its side effects have raised the need to change current PUVA protocols. Aim of the study: To determine whether reducing the treatment frequency of PUVA to twice/week instead of three times/week would affect the efficacy of PUVA therapy.

Patients and methods: The study included 20 psoriatic patients; randomized into two groups; 10 patients in each group. The first group received 2 weekly sessions; the second group received three. The study lasted until complete clearance or for 12 weeks (endpoint). PASI score was done prior to therapy; at mid therapy and at end of therapy (PASI final).

Results: No significant difference in PASI final and in the percentage of reduction of PASI score between both groups (P value > 0.05) was found; however; a significant difference in the total number of sessions and the total cumulative UVA doses between both groups was found (P value < 0.001).

Conclusion: Our study suggests reducing PUVA frequency and the cumulative UVA dose does not compromise the efficacy of PUVA; but it may improve its benefit/risk ratio. Restrictions: Few number of cases.

Keywords:

PUVA; Photochemotherapy; Psoriasis.

Faculty of Medicine

Dep. : Dermatology

Name : Medhat El Mofty



Title : Different Narrow Band-UVB Dosage Regimens in Dark Skinned Psoriatics
A Preliminary Study

Authors: Medhat El Mofty, Randa Yousef, Doaa Mahgoub, Heba Mashaly, Eman El-Nabarawy and Nesreen Samir

Published In : Photodermatology; Photoimmunology and Photomedicine

ISSN 0905 - 4383

Impact Factor 1.081

Abstract :

Background: Psoriasis is a common and relapsing disease which is both physically and psychologically disabling. Narrow band UVB (NB-UVB) is used in fair skinned population in suberythemogenic doses with good results; however in the darker skin population (skin types III; IV; V) erythemogenic doses have not been thoroughly investigated.

Aim: A left- right bilateral comparative trial was carried out to compare the suberythemogenic dose of NB-UVB versus erythemogenic dose in the treatment of dark skinned psoriatic patients. Patients and methods: The study was conducted on 20 patients with chronic plaque psoriasis. The left side was treated with the dose causing minimal erythema (100% of MED) while the right side received 70% of this MED (suberythemogenic side).

Results: Our results revealed no statistically significant difference in PASI final and in the percentage of reduction of PASI score between both sides as well as the total number of sessions (p -value > 0.05); while the total cumulative UVB dose on the suberythemogenic side was significantly lower (P -value < 0.001).

Conclusion: Our study recommends reducing the dose regimen of NB-UVB and consequently the cumulative UVB dose by using the suberythemogenic dosing schedule even in dark skin population.

Keywords:

NB-UVB; Psoriasis; Suberythemogenic dose; MED.

Faculty of Medicine

Dep. : ENT- Phoniatic Unit

Name : **Azza Adel Aziz**



Title : Public Health Impact of Hearing Impairment and Disability

Authors: M. N. Kotby, S. Tawfik, A. Aziz and H. Taha.

Published In : Folia Phoniatica et Logopedica

ISSN 1021 - 7762

Impact Factor 1.439

Abstract :

This presentation of the public health impact of hearing impairment highlights the important elements of interaction between the disability and community.

Objectives: Retrospective study to identify the size of the problem of hearing loss; illustrating not only the magnitude but also the serious effect of the lack of reliable data concerning this matter. It highlights the challenges met within a mid-economy community regarding the handling of the impact of the disability. The Egyptian data is given as an example of the situation in a mid-economy community.

Study Design: A brief introduction of some epidemiological factors of hearing impairment is presented including the size of the problem in Egypt. Data of the neonatal hearing screening program of the Audiology Unit; Ain Shams University; is presented. The impact of the disability is then discussed in relation to the age of onset and the degree and type of hearing loss. This is followed by the description of the nature and effect of the disability in the different age groups. A discussion of the various factors that may modify the capability of the community to deal with such disability follows. This includes various economic indices with their possible limitations on the part of the community. Such a briefing illustrates the challenges met in the rehabilitation of the deaf and the hearing-impaired in a developing mid-economy country. The broad lines of the management of the problem both at the prophylactic as well as the rehabilitative levels are discussed. A final remark on recommendations and possible future development in a developing country is presented.

Keywords :

Hearing disability; communicative rehabilitation; epidemiology of hearing disability.

Faculty of Medicine

Dep. : Gastroenterology

Name : **Mona A. Abu-Zekry**



Title : Prevalence of Celiac Disease in Egyptian Children Disputes the East–West Agriculture-dependent Spread of the Disease

Authors: M. Abu-Zekry, D. Kryszak, M. Diab, C. Catassi, and A. Fasano.

Published In : Journal of Pediatric Gastroenterology and Nutrition

ISSN 0277 - 2116

Impact Factor 2.102

Abstract :

Objectives: Celiac disease (CD) seems to be a common disorder in north Africa; however; to our knowledge no data are yet available on its prevalence in Egypt. This study was undertaken to investigate the frequency of CD in Egyptian children.

Patients and Methods: We investigated a sample of the general pediatric population (1500 individuals; 656 girls and 844 boys; age range 7 months to 18 years; median age 8.0 years) (group A); 150 children (age range 6 months to 13 years; median age 16months) admitted for diarrhea or failure to thrive (group B); and 250 children and adolescents with type 1 diabetes (group C). The screening test was serum class A anti-transglutaminase (anti-tTG) antibody; immunoglobulin A (IgA) antiendomysium; total IgA; and IgG anti-tTG; and small bowel biopsy was performed for confirmation of diagnosis.

Results: In group A; 8 of 1500 children fulfilled the criteria for CD diagnosis; the prevalence of CD was at least 1 in 187 individuals (0.53%; 95% CI 0.17%–0.89%). In group B; 7 of 150 children had CD (4.7%; 95% CI 1.4–7.9). In group C; 16 of 250 sera showed positive results to both the IgA anti-tTG and the IgA antiendomysium test (6.4%; 95% CI 3.4–9.4).

Conclusions: Celiac disease is a frequent disorder among Egyptian children; both in the general population and in at-risk groups. Therefore; our data do not support the theory of a Middle East–Europe CD prevalence gradient secondary to the pattern of agriculture spreading from the so-called Fertile Crescent.

Keywords:

Antitransglutaminase; antibodies; Celiac disease; Epidemiology; Screening.

Faculty of Medicine

Dep. : Industrial Medicine and Occupational Diseases

Name : Amal Mohamed Kamal El Safty



Title : Zinc Toxicity among Galvanization Workers in the Iron and Steel Industry

Authors: Amal Mohamed Kamal El Safty, Khalid El Mahgoub, Sawsan Helal and Neveen Abdel Maksoud

Published In : Annual of New York Academy of Science

ISSN 0077 - 8923 **Impact Factor** 1.731

Abstract :

Galvanization is the process of coating steel or cast iron pieces with zinc; allowing complete protection against corrosion. The ultimate goal of this work is to assess the effect of occupational exposure to zinc in galvanization process on different metals in the human body and to detect the association between zinc exposure and respiratory system affection. This study was conducted on 111 subjects in one of the major companies in iron and steel industry. Workers who were involved in galvanization process were 61 subjects - Fifty adult men were chosen as a matched reference group from other departments of the company. A;; workers were interviewed using special questionnaire on occupational history and chest diseases. Ventilatory functions and chest x-ray were assessed in all examined workers. Also complete blood count was performed; and serum zinc; iron; copper; calcium and magnesium levels were tested. This study illustrated the relation between zinc exposure in galvanization process and high zinc level among exposed workers which was associated with high prevalence rate of metal fume fever (MFF) and low blood copper and calcium levels. There was no statistically significant difference between the exposed and control groups as regards the magnesium level. No long term effect of metals exposure was detected on ventilatory functions or chest x-ray among the exposed workers.

Keywords :

Galvanization; Metal interaction; Zinc fume exposure.

Faculty of Medicine

Dep. : Industrial Medicine and Occupational Diseases

Name : Amal Mohamed Kamal El Safty



Title : the Impact of Nickel Aerosole Exposure on Worker's Health

Authors: Amal El Safty and Metwally F.M.

Published In : Toxicol. Let

ISSN 0378 - 2274

Impact Factor 2.826

Abstract :

Background: Electroplating processes result in the emission of aerosoles of soluble nickel compounds that is a recognised health hazard. Aim of the work: is to investigate health hazards associated with exposure in a nickel in electroplating workshop environmental air assessment at the workshop.

Methodology: Environmental air sampling was performed for nickel electroplating work shop that include 50 workers. For every worker personal interview; clinical examination including otolaryngeal examination was done. The results were compared to those obtained from 30 matched controls. Investigations involved urinary and serum nickel; kidney and ventilatory function tests; IgA and IgE immunoglobulins.

Results: Serum urea; creatinine and retinol binding protein were statistically significantly higher in exposed workers compared to the controls. Low levels of IgA and high levels of IgE were reported among our exposed workers. Reduction of spirometric measurements but not to the level of significance; was also demonstrated. The concentration of nickel in urine of workers averaged (2.9Ug/L) and in serum averaged (3.4 Ug/L). Statistically significantly positive correlation was found between serum levels of urea; creatinine; retinol binding protein and IgE and serum and urinary nickel of exposed workers.

Recommendations: We recommended periodic medical examination including chest and nasal sinuses x-rays annually. Nickel concentration in plasma and urine are helpful for screening and the biologic TLV of nickel in urine is considered as 150 Ug/L. Complaining cases should undergo sputum cytology and nasal mucosal biopsy. Patients who developed allergic asthma or who were suspected to be at increased risk of developing allergic asthma should be given a validated respiratory disease questionnaire and pulmonary function testing yearly.

Keywords :

Nickel aerosoles; Electroplating; Immuno-Toxicity.

Faculty of Medicine

Dep. : Internal Medicine

Name : **Salwa Ibrahim**



Title : Depression; Quality of life and Malnutrition Inflammation Scores in Hemodialysis Patients

Authors: Salwa Ibrahim and Omima El Salamony

Published In : American Journal of Nephrology

ISSN 0250 - 8095

Impact Factor 2.182

Abstract :

Background. We explored the relationship between depressive symptoms and poor QoL on the one hand and sociodemographic profile; dialysis adequacy; serum chemistry; malnutrition-inflammation score (MIS) and symptom burden on the other hand.

Methods. 60 chronic hemodialysis patients participated in the study between June and August 2007. They were on thrice weekly dialysis at the Kasr El-Aini Nephrology and Dialysis centre; Cairo University Hospital. We used the Beck Depression Inventory (BDI) to assess the severity of depression; and SF-36 questionnaire to assess quality of life in the study group .

Results. 20 patients (33.33%) had BDI score ≥ 15 . Two patients (3.33%) had QoL total score less than 50; 8 patients (13.33%) had scores in the range of 50-60; 30 patients (50%) had a score range of 60-70; 12 patients (20%) had scores of 70-80; 8 patients (13.3%) had a score range 80-90. Employment was found to significantly affect BDI scores; all patients with BDI scores ≥ 15 were unemployed. DSI and MIS showed significant positive correlations with BDI scores ($P < 0.05$) and significant negative correlations with F-36 scores ($P < 0.05$) .

Keywords:

Depression; Inflammation-malnutrition; Quality of life.

Faculty of Medicine

Dep. : Internal Medicine

Name : **Salwa Ibrahim**



Title : Modification of Diet in Renal Disease Equation underestimates GFR in Egyptian kidney Donors

Authors: Salwa Ibrahim and Laila Rashed

Published In : Experimental and Clinical Nephrology

ISSN 1304 - 0855

Impact Factor

Abstract :

Background. Inulin clearance and radioisotopic studies are the most accurate methods for GFR measurement. We examined the accuracy of the MDRD equation and creatinine clearance (CrCl) based on 24-hour urine collection in the prediction of GFR in a group of healthy donors.

Methods We examined the medical records of 100 of kidney donors who underwent 99m Tc-diethylenetriamine-pentaacetic acid (DTPA) renal clearance and CrCl at the transplant outpatient clinic; Cairo University Hospital between June 2002 and July 2006. GFR was predicted with the abbreviated MDRD formula. We examined the significant differences; potential correlations and agreements between the predicted and measured GFR.

Results. The mean eGFR MDRD was 8.16% lower than 99M Tc-DTPA GFR (116.11 ± 25.44 ml/min/1.73 m² vs. 126.32 ± 24.21 ml/min/1.73 m²; the difference range - 84 to + 61ml/min/1.73 m²; P=0.002) . CrCl was 13.14% higher than 99M Tc-DTPA GFR (142.90 ± 27.51 ml/min/1.73 m²; the difference range + 65 to -60 ml/min/1.73 m²; P<0.001). A significant positive correlation was observed when CrCl and 99M Tc-DTPA measured GFR are compared (R=0.451; P=0.000). No significant correlation was noted between eGFR MDRD and 99M Tc-DTPA measured GFR (R=0.126; P=0.211). Bland Altman analysis showed poor agreement between GFR MDRD & CrCL on the one hand and measured GFR on the other hand.

Keywords:

Estimation of kidney function; Prediction equation; Creatinine clearance.

Faculty of Medicine

Dep. : Internal Medicine

Name : Salwa Ibrahim



Title : Correlation of Urinary Monocyte Chemoattractant Protein-1 with other Parameters of Renal Injury in Type-11 Diabetes Mellitus

Authors: Salwa Ibrahim and Laila Rashed

Published In : Saudi Journal of Kidney Disease and Transplantation

ISSN 1319 - 2442

Impact Factor

Abstract :

Introduction. Diabetic nephropathy (DN) is the leading cause of end stage renal disease in western world. Increased number of interstitial macrophages has been observed in biopsies from patients with DN. We examined urinary level of MCP-1 in type 2 DM patients to assess the possible correlation between its level and the parameters of renal injury.

Methods. Urinary MCP-1 level was assessed in 75 patients with type 2 DM (25 with & 25 without microalbuminuria and 25 with macroalbuminuria and renal impairment) and compared with matched healthy control subjects. HBA1c and estimated glomerular filtration rate (eGFR) derived from the abbreviated MDRD equation were examined in the study groups in relation to the urinary MCP-1.

Results. Urinary MCP-1 level was significantly higher in patients with micro and macroalbuminuria (167.41+50.23 and 630.87+318.10 ng/g creatinine respectively) as compared with normoalbuminuric patients and healthy controls (63.85+21.15 and 61.50+24.81 ng/g creatinine; P<0.001). MCP-1 correlated positively with urine albumin/creatinine ratio (ACR) (r=0.75; P<0.001); HBA1c (r=0.55; P<0.001) and inversely with eGFR (r=-0.60; P<0.001).

Conclusions. The study findings suggest that hyperglycemia is associated with increased urinary levels of MCP-1 that is closely linked to renal damage as reflected by proteinuria and eGFR levels.

Keywords:

MCP; 1-Diabetic Nephropathy; GFR; Proteinuria.

Faculty of Medicine**Dep. :** Medical Biochemistry**Name :** Olfat Shaker**Title :** Is There A Relationship Between Homocysteine and Vitiligo- A Pilot Study**Authors:** O.G. Shaker and S.M.R. El-Tahlawi**Published In :** BJD**ISSN** 0007 - 0963**Impact Factor** 3.503**Abstract :**

Pigmentary dilution is observed in patients with homocystinuria. Therefore; it is possible that an increase of local homocysteine (Hcy) interferes with normal melanogenesis and plays a role in the pathogenesis of vitiligo. Vitamin B12 and folic acid; levels of which are decreased in vitiligo; are important cofactors in the metabolism of Hcy. Consequently; a nutritional deficiency in either of these two vitamins will result in an increase in homocysteine in the circulation; a finding that we expect to find in vitiligo.

Objective: To determine the level of Hcy in the blood of patients with vitiligo as a first step in revealing if it has any relationship with the pathogenesis of vitiligo and consequently if this will have an impact on the treatment of vitiligo.

Methods: Twenty-six patients of both sexes with vitiligo (age range 20–50 years; mean 31.4 ± 8.09) and 26 age-matched healthy controls were included in the study. After excluding factors that may affect serum Hcy levels; blood samples from patients and controls were obtained for homocysteine determination by enzyme immunoassay.

Results: The mean serum level of Hcy was significantly higher in patients with vitiligo than in controls (21.61 ± 13.28 vs. 13.1 ± 4.88 $\mu\text{mol L}^{-1}$; $P < 0.001$). The Hcy level was significantly higher in male patients than in female patients (28.67 ± 15.95 vs. 15.56 ± 6.2 $\mu\text{mol L}^{-1}$; $P < 0.001$) and in male controls compared with female controls (15.07 ± 4.61 vs. 12.05 ± 4.82 $\mu\text{mol L}^{-1}$; $P < 0.001$). The homocysteine level was related to the activity of vitiligo and was significantly higher in patients with progressive disease than in controls (25.4 ± 14.99 vs. 13.1 ± 4.88 $\mu\text{mol L}^{-1}$; $P < 0.001$). No significant difference in Hcy levels was found between either untreated vitiligo patients (22.77 ± 13.36 $\mu\text{mol L}^{-1}$) or patients receiving ultraviolet therapy (20.45 ± 13.73 $\mu\text{mol L}^{-1}$) and the total patient group (21.62 ± 13.28 $\mu\text{mol L}^{-1}$).

Conclusion: An elevated homocysteine level may be a precipitating factor for vitiligo in predisposed individuals. In view of the biological role of vitamin B12 and folic acid in

Hcy metabolism; we present our recommendations regarding the investigation and treatment of this common disease.

Keywords:

Homocysteine; Vitiligo.

Faculty of Medicine

Dep. : Medical Biochemistry

Name : **Olfat G. Shaker**



Title : Possible Role of Nerve Growth Factor and Interleukin-18 in Pathogenesis of Eczematous Lesions of Atopic Dermatitis

Authors: Olfat G. Shaker, M. El-Komy, S.O. Tawfic, N. Zeidan and R.H. Tomairek

Published In : Dermatological Science

ISSN 0923 - 1811

Impact Factor 2.2

Abstract :

Data suggest that Th2 and Th1 cytokines contribute to the pathogenesis of AD with relative contribution of each cytokine dependent on duration of the skin lesions. T-cell responses being significantly tilted towards Th2 lymphocyte activity in patients with eczematous (acute) lesions; that is secretion of IL-4; IL-5 and IL-13; leading to IgE mediated immune reactions; in contrast to Th1 lymphocyte responses; in which IL-2 and IFN-g are the predominant cytokines.

Faculty of Medicine

Dep. : Medical Biochemistry

Name : **Hanan Hosni Ahmed Ismail**



Title : Molecular Evaluation of Apoptosis Versus Antiapoptotic Angiogenic Markers in Hepatocellular Carcinoma

Authors: Mohamed Talaat Abdel Aziz, Dawlat El-Miligy, Mona A. Amin, Amina Hosni Ahmed, Hanan Hosni Ahmed, Samer Marzouk and Dina Sabry.

Published In : Clinical Biochemistry

ISSN 0009 - 9120

Impact Factor 2.072

Abstract :

Objective: To assess the role of HO-1 in HCC progression and to study the expression of apoptotic factors represented by TNF-alpha; and Fas-L versus antiapoptotic and angiogenic factors represented by HO-1; TGF-beta; HGF; and VEGF in HCC compared to non cancerous cirrhotic liver.

Design And Methods: Liver biopsies were taken from twelve patients with grade II HCC confined to the liver and twelve patients with non cancerous liver cirrhosis (served as control). RT-PCR of previous genes was evaluated.

Results: HO-1; VEGF; HGF; and TNF-alpha genes were significantly increased ($P<0.05$) in HCC compared to control. Fas-L showed a significant decrease ($P<0.05$) in HCC compared to control. TGF-beta was higher in HCC than control but the difference was not statistically significant ($P>0.05$). HGF showed significant positive correlation with HO-1 ($r=0.8217$; $P=0.001$).

Conclusion: HCC is associated with increased expression of VEGF; HGF; and TGF-beta; and with suppression of Fas-L. In addition; HO-1 is highly significantly expressed in HCC. The significant positive correlation between HO-1 and HGF was first reported in Egyptian human liver biopsies; and this suggests that it may play a role in the progression of hepatocellular carcinoma.

Keywords :

Hepatocellular carcinoma; Heme oxygenase; Angiogenesis; Apoptosis.

Faculty of Medicine

Dep. : Medical Biochemistry

Name : **Hazem Mahmoud Ali Atta**



Title : Role of Polyunsaturated Fatty Acids in the Management of Egyptian Children with Autism

Authors: Nagwa A. Meguid, Hazem M. Atta, Amr S. Gouda and Rehab O. Khalil

Published In : Clinical Biochemistry

ISSN 0009 - 9120

Impact Factor 2.072

Abstract :

Objective: Estimation of free polyunsaturated fatty acids (PUFAs) in blood and evaluation of behavior of autistic children before and after taking fish oil (Efalex®) were performed.

Design and methods: 30 autistic children (18 males and 12 females) aged 3–11 years and 30 healthy children as control group were included in this study. Tandem mass spectrometry and CARS were used to estimate the free PUFAs from dried blood spot and to evaluate the autistic behavior respectively.

Results: Before taking Efalex®; linolenic acid showed a significant reduction (71%); followed by docosahexaenoic acid (65%) and arachidonic acid (45%); while linoleic acid was the least affected PUFA (32%). After taking Efalex®; 66% of autistic children showed clinical and biochemical improvement; linolenic acid and docosahexaenoic acid showed the highest levels after Efalex® supplementation.

Conclusion: PUFA supplementation may play an important role in ameliorating the autistic behavior.

Keywords:

Autism; Polyunsaturated fatty acids; Fish oil; Efalex®; Tandem mass spectrometry.

Faculty of Medicine

Dep. : Medical Biochemistry

Name : **Hazem Mahmoud Ali Atta**



Title : Effect of Bone Marrow – Derived Mesenchymal Stem Cells on Cardiovascular complications in Diabetic Rats

Authors: Mohamed T. Abdel Aziz, Mohamed F. El-Asmar, Mohamed Hidara, Hazem Mahmoud Atta, Nagwa K. Roshdy, Laila Ahmed Rashed, Dina Sabry, Mary Andraws Youssef, Ahmed Talaat Abdel Aziz and Manal Moustafa.

Published In : Medical science Monitor

ISSN 1234 - 1010

Impact Factor 1.607

Abstract :

Background: The purpose of this study was to investigate the effect of mesenchymal stem cells (MSCs) on cardiovascular complications of type 1 diabetes mellitus (DM) in rats .

Material/Methods: MSCs were derived from the bone marrow of male albino rats. The MSCs were characterized morphologically and by RT-PCR for CD29 expression. They were then infused into female rats which were made diabetic by IP injection of streptozotocin (STZ). The rats were divided into control; STZ; and STZ plus MSC groups. Serum insulin; glucose; and fibrinogen were estimated in all groups and the Y-chromosome gene sry was detected by PCR in pancreatic and cardiac tissues. Physiological cardiovascular functions (heart rate; systolic blood pressure) were assessed by a Langendorff apparatus.

Results: Diabetic rats which received MSCs showed significantly lower serum glucose and increased serum insulin levels compared with the STZ group. Improvement of cardiovascular performance was also observed in the STZ/MSC group compared with the STZ group. The sry gene was detected by PCR in the pancreatic and cardiac tissues of the STZ/MSC group.

Conclusions: Rat bone marrow harbors cells that have the capacity to differentiate into functional insulin-producing cells capable of controlling blood glucose level in diabetic rats. This may provide a source of cell-based therapy for DM. Furthermore; MSC transplantation can improve cardiac function in DM.

Keywords:

Mesenchymal stem cells; Insulin; Diabetes mellitus; Cardiovascular Complications.

Faculty of Medicine

Dep. : Neurology

Name : **Lamia Medhat Afifi**



Title : Sleep Evoked Delta Frequency Responses Show A Linear Decline in Amplitude Across the Adult Lifespan

Authors: Ian M. Colrain, Kate E. Crowley, Christian L. Nicholas, Lamia Afifi, Fiona C. Baker and Mayra Padilla

Published In : Neurobiology of aging

ISSN 0197 - 4580

Impact Factor 5.607

Abstract :

Aging is associated with many changes in sleep; with one of the most prominent being a reduction in slow wave sleep. Traditional measures of this phenomenon rely on spontaneous activity and typically confound the incidence and amplitude of delta waves. The measurement of evoked K-complexes during sleep; enable separate assessment of incidence and amplitude taken from the averaged K-complex waveform. The present study describes data from 70 normal healthy men and women aged between 19 and 78 years. K-Complexes were evoked using short auditory tones and recorded from a midline array of scalp sites. Significant reductions with age were seen in the amplitude of the N550 component of the averaged waveform; which represents the amplitude of the K-complex; with linear regression analysis indicating approximately 50% of the variance was due to age. Smaller; yet still significant reductions were seen in the ability to elicit K-complexes. The data highlight the utility of evoked K-complexes as a sensitive marker of brain aging in men and women.

Keywords:

K-Complex; Delta EEG; Sleep.

Faculty of Medicine

Dep. : Neurology

Name : Mohamed Elmahdy



Title : GDC 360° for the Endovascular Treatment of Intracranial Aneurysms: a Matched-pair Study Analysing Angiographic Outcomes with GDC 3D Coils in 38 Patients

Authors: Christian A. Taschner, Laurent Thines, Mohamed El-Mahdy, Henda Rachdi, Jean-Yves Gauvrit, Jean-Paul Lejeune, Jean-Pierre Pruvo and Xavier Leclerc

Published In : Neuroradiology

ISSN 0028 - 3940

Impact Factor 1.759

Abstract :

Introduction The purpose of this study was to determine whether coil embolisation with a new complex-shaped Guglielmi Detachable Coil (GDC 360°; Boston Scientific Neurovascular; Fremont; CA; USA) has any effect on the stability of aneurysm occlusion. **Materials and methods** Fifty-one consecutive patients with intracranial aneurysms treated with GDC 360° were included. Angiographic results and adverse neurological events during the follow-up period were recorded. For 38 patients treated with GDC 360° with available follow-up data; a corresponding patient treated with GDC 3D was identified from our database. Matches were sought for rupture status; location; aneurysmal size; and neck size. The angiographic outcome of these matched controls at 6 months was compared to aneurysms treated with GDC 360°. **Results** Initial angiographic controls for 38 patients treated with GDC 360° showed complete occlusion in 32 aneurysms; and a neck remnant in six. At 6-month follow-up; complete occlusion was found in 29; a neck remnant in eight; and a residual aneurysm in one. One patient treated with GDC 360° needed retreatment for a major recanalisation. In 38 matched patients treated with GDC 3D; initial angiographic controls found complete aneurysmal occlusion in 30 aneurysms and a residual neck in 8. At 6-month follow-up; 24 aneurysms were completely occluded; ten showed a neck remnant; and residual aneurysms were seen in four. Four patients; treated with GDC 3D; were retreated for major aneurysm recanalisations.

Conclusion Our data suggests that endovascular coil embolisation with GDC 360° might improve long-term stability of coiled aneurysms when compared to GDC 3D.

Keywords:

Intracranial aneurysms ; Coil embolisation ; Complex coils ; Follow-up.

Faculty of Medicine

Dep. : Obstetrics & Gynecology

Name : Hesham G. Al-Inany



Title : Prospective Randomized Study Comparing Luteal Phase Support for Intracytoplasmic Sperm Injection Patients Up to First Ultrasound Versus Three Weeks More

Authors: Mohamed A. Aboulghar, Yahia M. Amin, Hesham G. Al-Inany, Mona M. Aboulghar, Latouna M. Mourad, Gamal I. Serour and Ragaa T. Mansour.

Published In : Human Reproduction

ISSN 0268 - 1161

Impact Factor 3.543

Abstract :

Background: There is a consensus that administration of progesterone to women after IVF for luteal phase support (LPS) is associated with a higher ongoing pregnancy rate. There are few studies including only one randomized study which examined the optimal duration of LPS.

Methods: A questionnaire concerning details of LPS was returned from 20 leading IVF center. Then we randomized 257 pregnant women after ICSI on day of first ultrasound to continue LPS for 3 more weeks or stop on day of ultrasound.

Results: The duration of LPS in the questionnaire varied from day of positive pregnancy test up to 12 weeks of pregnancy in different centers.

Patients included in the randomized study were divided in two groups. Group A = 132 continued LPS for 3 weeks after first ultrasound; Group B = 125 stopped LPS on day of first ultrasound. Miscarriage rate after confirming pulsations up to 20 weeks gestation was 4.6% in group A and 4.8% in group B (OR=0.72; 95% CI = 0.3-3.1). Bleeding episodes were 15.9% in Group A as compared to 20.8% in group B (OR = 0.72; 95% CI = 0.38-1.36.)

Conclusion: There is no international consensus about duration of LPS; our single our single centre trial did not support extending the LPS beyond the day of first treatment .

Keywords:

luteal phase Support; Intracytoplasmic Sperm injection; Ultrasound ; RCT.

Faculty of Medicine

Dep. : Obstetrics & Gynecology

Name : Hesham G. Al-Inany



Title : Fetal & Neonatal Responses Following Maternal Exposure to Mobile Phones

Authors: Ahmed Y. Rezk, Khaled Abdulqawi, Randa M. Mustafa, Tark M. Abo El-Azm and Hesham G. Al-Inany

Published In : Saudi Medical Journal

ISSN 0379 - 5284

Impact Factor 0.329

Abstract :

The study looked at the effect of electromagnetic fields emitted by mobile telephone during a telephone conversation for 10 minutes by pregnant mothers on fetal heart rate and fetal cardiac output. Ninety women with uncomplicated pregnancies aged from 18 to 33 years were included. The pregnant mothers were exposed to EMFs emitted by mobile telephone during a telephone conversation for 10 minutes. The main outcome measures were changes in fetal heart rate and fetal cardiac output. The study found a significant increase in FHR; a significant decrease in stroke volume and a significant decrease in COP. All these changes are attenuated with increase in gestational age. Exposure of pregnant women to mobile phone significantly increases FHR & significantly decreases COP.

Keywords:

Mobile phones; EMFS; FHR; COP; ESV; EDV.

Faculty of Medicine**Dep. :** Obstetrics & Gynecology**Name :** Hesham G. Al-Inany**Title :** Efficacy and Safety of Human Menopausal Gonadotrophins Versus Recombinant Follicle Stimulating Hormone: A Systematic Literature Review and Meta-Analysis**Authors:** Hesham G. Al-Inany, Ahmed M. Abou-Setta, Mohamed A. Aboulghar, Ragaa T. Mansour and Gamal I. Serour**Published In :** RBMonline**ISSN** 1472 - 6483**Impact Factor** 2.84**Abstract :**

LH activity has been proposed to influence treatment response and outcome. In order to assess its clinical profile and efficacy; we compared hMG with rFSH in IVF/ICSI cycles. Meticulous computerized and hand searches were conducted for relevant citations. Primary outcome measures were live-birth and OHSS rates. Secondary outcomes were the clinical pregnancy; multiple pregnancy; miscarriage rates; and cycle characteristics. The live-birth rate was found to be significantly higher with hMG (O.R=1.20; 95%CI=1.01-1.42) than rFSH; but OHSS rates (O.R=1.21; 95%CI=0.78-1.86) were not significantly different. As for the secondary outcomes; there was statistical significance with regards the clinical pregnancy rate also in favor of the hMG group. Even so; there was significantly less treatment days; total dose; and embryos produced in the rFSH group compared with the hMG group. Albeit; the number of oocytes retrieved was higher for the hMG group. The other secondary outcomes were not different between the two groups. Subgroup analyses of only studies using a long protocol of down-regulation or using highly purified-hMG showed similar live birth and clinical pregnancy rates as the original cohort. In conclusion; hMG has been demonstrated to be superior to rFSH with regards the clinical outcomes; with equivalent patient safety during assisted reproduction.

Keywords :

Ovulation Stimulation; HMG; Recombinant; FSH; Meta-Analysis.

Faculty of Medicine

Dep. : Obstetrics & Gynecology

Name : Hesham G. Al-Inany



Title : Exaggerated Flare Up Effect of GnRH Agonist Resulting in Multifollicular Development Without hMG Administration

Authors: Mohamed Walaa El-Deeb, Hamed Youssef, Sherif Samy, Rasha Bassiuny and Hesham G. Al-Inany.

Published In : Middle East Fertility Society Journal

ISSN 1110 - 5690

Impact Factor

Abstract :

Over the last two decades; GnRH agonists have been used in ovarian stimulation protocols in assisted reproductive techniques (ART) in combination with gonadotrophins to achieve multifollicular development without premature LH surge. GnRH agonists induce an initial rise of gonadotrophins (flare-up) before they achieve suppression through desensitization. This flare up induces release of gonadotrophins from the pituitary gland stimulating the growth of follicle. Thus follicular cyst develops as a response of this flare up but soon pituitary desensitization is achieved resulting in stop of stimulus and impaired ovulation.

Faculty of Medicine**Dep.** : Obstetrics & Gynecology**Name** : **Hesham G. Al-Inany****Title** : A Prospective Comparative Study to Assess Receptor Polymorphism in Women with Polycystic Ovary Syndrome Vs Normo-Ovulatory Women**Authors:** Hesham G. Al-Inany and Abeer Mohyee**Published In** : Middle East Fertility Society Journal**ISSN** 1110 - 5690**Impact Factor****Abstract :**

Objective: to examine the associations of polymorphisms of β 3-adrenergic receptor and glycogen synthetase gene with obesity and insulin resistance in women with polycystic ovary. Design: prospective controlled trial

Setting: Faculty of medicine; Cairo University Participants & Methods: Subfertile women with PCOS; n=43 (group I) were compared to matched age group of normoovulatory women (control group II (n=20)). Both groups were further subdivided according to Body mass index (BMI) into obese and non obese participants. Ultrasound examination and blood sampling were done and fasting blood glucose; insulin resistance; total cholesterol; and triglycerides were estimated. Trp64Arg polymorphism of the ADRB3 and A1A2 polymorphism of the GS gene were determined by PCR-RFLP analysis.

Results: The frequency of Trp64Arg variant was significantly higher in obese PCOS women (24%) compared with obese control group (0%); $P = 0.044$. A major effect of the Trp64Arg variant on insulin resistance (HOMA-IR) could not be demonstrated. On the other side; all women were normal for the glycogen synthetase gene (A1A1) whether obese or non obese; whether PCO or normoovulatory .

Association between polycystic ovary and polymorphism of ADRB3 gene was found to be of high significance [Odds Ratio = 10.03 95% CI = 2.73 to 36.72] $P= 0.00054$. An association between Trp64Arg genetic variant and obesity in PCOS women was demonstrated .

Conclusion: Polymorphism of glycogen synthetase may not appear to be higher in PCOS women compared to controls but this needs further verification by a larger study.

Faculty of Medicine

Dep. : Obstetrics & Gynecology

Name : Hesham G. Al-Inany



Title : Assessment of the Endometrium in Postmenopausal Bleeding: The Role of Transvaginal Sonography and Doppler Velocimetry

Authors: Ahmed Aboul Nasr, Hesham G. Al-Inany, Ahmed Soliman, Mohammed Ali and Rasha Mohamed

Published In : Middle East Fertility Society Journal

ISSN 1110 - 5690

Impact Factor

Abstract :

Objective: to study the role of Transvaginal ultrasonography and Doppler in the assessment of the endometrium in patients with postmenopausal bleeding.

Material And Methods: The present study included 40 patients from kasr El-aini outpatient gynecologic clinic in the period from January 2006 to December 2006. All patients were subjected to the following Transvaginal ultrasonography ;Transvaginal pulsed Doppler on both uterine arteries and fractional Curettage was done only for the study group.

Results: there were significant differences between the study and the control groups regarding to uterine length ($P = 0.005$) and uterine width ($P < 0.05$); Taking 6mm endometrial thickness as a cut-off value in our study transvaginal ultrasound showed a sensitivity of 81.8%; specificity of 22.2%; Regarding the Doppler study Its sensitivity to detect pathological abnormalities was 10.0% specificity 88.9%

Conclusion: Although both transvaginal ultrasonographic endometrial examination and Doppler velocimetric study of the uterine artery posses high sensitivity and specificity that makes each of them clinically useful as a single diagnostic tool in discriminating atrophic from abnormal pathological endometrium in cases with postmenopausal bleeding. Yet; the present study emphasizes the importance of the combined examination using both techniques to increase the diagnostic accuracy also our study highlights the importance of fractional curettage in completing the assessment of the endometrium

Keywords:

Transvaginal Ultrasonography; Endometrium; Doppler.

Faculty of Medicine**Dep. :** Oncology**Name :** Ahmed Yassar A. Abo Madyon**Title :** Effektivitat und toxizitat der intensitatsmodulierten Radiotherapie (IMRT) als hypofraktionierter Boost beini Prostatakarzinom**Authors:** Kosakowski J, Welzel G, Abo-Madyan Y, Mai S, Wertz H, Wenz F. and Lohr F.**Published In :** Strahlenther Onkol**ISSN** 0179 -7158**Impact Factor** 3.357**Abstract :**

Fragestellung: Es werden erste Ergebnisse einer Bestrahlungsserie vorgestellt; bei der die IMRT als hypofraktionierte Boostbestrahlung zur Dosisescalation nach einer 3D-Konformalen Bestrahlung beim Prostatakarzinom angewendet wurde .

Methodik: 49 Patienten (Behandlung 2002-2006) wurden mit einem medianen Nachbeobachtungszeitraum von 22 Monaten verfolgt. Nach initialem PSA-Wert; TNM Stadium und Gleason Score wurden sie Risikogruppen zugeordnet (niedriges (n=5)/intermediäres (n=14)/hohes Risiko (n=30). Alle Patienten erhielten eine 3D-Konformale Bestrahlung bis zu einer medianen Dosis von 60 Gy (ED 2 Gy). Es folgten eine Aufsattigung der Prostata und SB-Region über eine intensitätsmodulierte Bestrahlungstechnik (mediane kumul. GD 71 Gy) sowie einen simultan integrierten Boost (mediane kumul. GD 74.1 Gy; ED 2.8 Gy). Bei 16 Patienten der Hochrisikogruppe wurde mit einer Beckenbestrahlung (mediane GD 44 Gy) begonnen. Pratherapeutischer Status; Akut- und Spättoxizitäten wurden nach LENT-SOMA erhoben. Die Auswertung der biochemischen Rezidivfreiheit erfolgte nach RTOG/ASTRO phoenix Definition. Die Lebensqualität (LQ) wurde mit den Fragebogen EORTC-QLQ-C30 und dem Modul PR25 erfasst.

Ergebnisse: Die Toxizität wurde absolut erhoben und aktuarisch für den Zeitpunkt 22 Monate nach Bestrahlung abgeschätzt. 2 von insgesamt 46 Patienten gaben eine Inkontinenzverschlechterung um 1 Grad an (aktuar. Inzidenz >7%; keine höhergradige Verschlechterung). Verschlechterungen um mind. 1 Grad traten bei jeweils 5 Patienten hinsichtlich Miktionsbeschwerden (3x Grad 1; 1x Grad 2) und Blutung (2x Grad 1; 3x Grad 2) auf (aktuar. Inzidenzen zwischen 0 und 10%). Eine Potenzverschlechterung um mind. 1 Grad wurde bei 32 Patienten beobachtet (15x Grad 1; 8x Grad 2; 9x Grad 3; aktuar. Inzidenz für Verschlechterung <1 Grad 46%; für <2 Grad 30%). Das biochemische Rezidivrisiko aktuar. Überleben des Gesamtkollektivs (n=49) beträgt nach 22 Monaten 84.0%; in der Hochrisikogruppe (n=30) 73.7% und in der Gruppe mit niedrigem und intermediärem

Risiko (n=19) 100%; da Rezidive (n=8) bisher ausnahmslos in der Hochrisikogruppe auftraten. Der Vergleich des aktuar. Überlebens von Patienten ohne/>6 Monate (n=37.6 Rezidive) vs; <6Monate (n=12.2 Rezidive) HT konnte keinen sign. Unterschied (84.8% vs. 83.3%) zeigen. Die Ergebnisse zur allgemeinen LQ sind vergleichbar mit der altersentsprechenden; gesunden Normalbevölkerung. Diarrhoe-Beschwerden traten im untersuchten Kollektiv jedoch signifikant häufiger auf (p=0.001). Die Daten zur tumorspezifischen LQ sind vergleichbar mit denen 3D-konformal behandelter Patienten in konventioneller Dosierung (70Gy).

Schlussfolgerung: Intensitätsmodulierte Radiotherapie (IMRT) als hypofraktionierter Boost erlaubt eine Dosisescalation in verkürzter Gesamtbehandlungszeit-mit guten Ergebnissen hinsichtlich Nebenwirkungsrate; lokaler Tumorkontrolle und Lebensqualität.

Faculty of Medicine**Dep. :** Oncology**Name :** Ahmed Yassar A. Abo Madyon

Title : Vergleich der Intensitätsmodulierten Arc Therapie (1 AAT) mit der seriellen Tomotherapie und der step-and-shoot IMRT für die Bestrahlung des Prostatakarzinoms hinsichtlich Effizienz und Planqualität

Authors: Wolff D, Stieler F, Lohr F, Polednik M, Steil V, Abo-Madyan Y. and Wenz F

Published In : Strahlenther Onkol

ISSN 0179 - 7158

Impact Factor 3.357

Abstract :

Einleitung: Die Intensitätsmodulierte Arc Therapie (IMAT) steht an der Schwelle zur breiten klinischen Einführung und eröffnet das Potential; intensitätsmodulierte Strahlentherapie mit hoher Effizienz durchzuführen. Ziel dieser Untersuchung war der Vergleich mit den klinisch etablierten IMRT-Verfahren serielle Tomotherapie und Step-and-shoot IMRT für die Behandlung des Prostatakarzinoms .

Methodik: Als Basis für einen Planvergleich dienten neun Datensätze von Patienten mit Prostata Ca (mittlere Zielvolumengröße 269ml); für die Pläne für alle drei Bestrahlungsverfahren berechnet wurden. Step-and –Shoot IMRT wurde für einen MLC (2x40 Leaves; 1cm) und serielle Tomotherapie für den multivane-Kollimator MIMiC jeweils mit Corvus 6.3 (Pencil-Beam-Algorithmus) geplant. Die Berechnung der IMAT-Pläne erfolgte mit dem Planungssystem ERGO++ (3D Line Medical Systems/Elekta; Great Britain) ebenfalls mittels Pencil-Beam-Algorithmus; Für Step-and –Shoot-Pläne wurden 7 isotrop verteilte Einstrahlrichtungen gewählt. Die Pläne mittels des Peacock-Systems wurden im 1cm-Modus und mit Bogen von 300 berechnet. Grundlage der IMAT-Pläne waren eine 360 und zwei 100-Rotation .

Konformalitäts- ($CI=V_{target}$) und Homogenitätsindex ($HI=D_{max} / D_{verschr}$) sowie mediane Dosis der Risikoorgane und die Dosis; 95% des Zielvolumen umschließt waren Grundlagen für den Planvergleich.

Ergebnisse: Die mittleren Indizes für Konformalität und Homogenität des Peacock-Systems waren $GI\ 2.34/HI\ 1.21$; der MLC basierten IMRT $CI\ 2.89/HI\ 1.22$ und der IMAT-Pläne $CI\ 2.02/HI\ 1.11$. Bei einer Verschreibungsdosis von Median 76Gy im PTV waren die mittleren Risikoorganbelastungen (MIMiC/MLC/IMAT) für das anteriore Rektum (52.2Gy / 52.4Gy / 60.5Gy); das posteriore Rektum (32.3Gy / 33.5Gy / 34.3Gy) und für die Blase (44.9Gy / 44.1Gy / 53.7Gy). Volumina für 50% der Verschreibungsdosis (38Gy) im Normalgewebe waren 1091ml / 1583ml / 1191ml. Die Dosisabdeckung im PTV; repräsentiert durch die Dosis; die 95% des PTV umschließt; für (MIMiC/

MLC/IMAT) war 68.8Gy / 66.6Gy / 70.7Gy. Die mittleren Bestrahlungszeiten (MIMiC/ MLC/ IMAT) waren 15min / 7.5min / 3min.

Diskussion: Beide Rotationstherapieverfahren zeigten ein rehohtes MaB an Konformalitat; Dosisabdeckung sowie geringere Normalgewebsbelastung gegenüber den MLC basierten Ansatz. Homogenitat und Risikoorganbelastung für Rectum posterior waren bei allen Planen vergleichbar. Hinsichtlich der Bestrahlungszeit zeigt sich mit 3min ein Vorteil für IMAT gegenüber 7.5min für Step-and-Shoot IMRT und 15min für die serielle Tomotherapie.

Faculty of Medicine**Dep. :** Oncology**Name :** Ahmed Yassar A. Abo Madyon**Title :** Dynamic Sstrategy for Compensating Interfractional Errors Using Post-Optimization Tools for Adaptie Radiotherapy (ART) Of Prostate Cancer**Authors:** Boggula R, Abo-Madyon Y, Wertz H, Lorenz F, Wolff D, Lohr F, Wenz F and Hesser J.**Published In :** Strahlenther Onkol**ISSN** 0179 - 7158**Impact Factor** 3.357**Abstract :**

Purpose: To evaluate the feasibilty of an integrated workflow of ART for prostate cancxer using online information for the management of interfractional variability in the organ valumes with a special emphasis on IMRT post-optimization tools.

Methods and materials: Intensity Modulated Radiotherapy Therapy (IMRT) treatment plans were created with Corvus 6.2 TPS (NOMOS Inc. USA.) for three prostate cancer patients on Computed Tomography (CT) taken at the time of simulation. The interfractional variability in the organ volumes (due to varying reetal filling) were recorded at the time of treatment delivery using KV-Cone Beam CT (CBCT) (Elekta Synergy; England) and the corresponding deviations in the these structures were evaluated. With the help of in-house software; the CBCT IMAGES were modified to approximate the correct electron density/Hounsfield Units conversion for treatment planning purpose. Four different types of treatment plans namely reference treatment plan and treatment plans with and without translational-couch-shift and finally a treatment plan adapted to the anatomical changes by employing post-optimization tools (Active Rxa Module of Corvus 6.2 ;(were created and compared. The AetiveRxa helps in fine-tuning the dose distribution to the patient's daily needs by dnectly manipulating dose not only on a single slice but also volumetrically. A Quantitative analysis was done by comparing the Mean DVHs from the three patients plans.

Results: In comparison to the reference plan; the mean PTV-D95 (D95: done delivered to at least 95% of volume) was decreased by 34% ; 27% and 4.5% in the uncorrected setup; translational-isocenter correction; and adapted plan respectively. In the rectum; the mean D30 & D60 (dose delivered to at least 30% and 60% volume of the rectum) was increased in the uncorrected –setup by 64% & 61% compared to the reference plan espectively. This additionol increase of dose; in the uncorrected-setup; was dropped to 36% & 20% (D30 & D60) by using translational-isocenter correction; while by applying the optimization tools; the rectal dose was further decreased to- 5% &

8% (D30 & D60) compared to the reference plan (negative sign indicates that the dose is lower than the reference plan showing a much better sparing of rectum in the adapted plans).

Conclusions: Using the post-optimization tools within the discipline of an ART workflow; allowed us to re-modulate the dose distribution to closely match the original IMRT treatment plan despite interfraction variations (volumes; positions; shapes of targets and critical normal tissues) which can significantly affect treatment outcomes.

Faculty of Medicine**Dep. :** Oncology**Name :** Ahmed Yassar A. Abo Madyon**Title :** Imat vs; step-and-shoot Imrt vs. 3D-Rt for Integral Treatment of Pelvis and Inguinal Lymph Nodes in Anal Cancer**Authors:** Stieler F, Lohr f, Wolff D, Steil V, Abo-Madyan Y, Wenz F and Mai S.**Published In :** Strahlenther Onkol**ISSN** 0179 - 7158**Impact Factor** 3.357**Abstract :**

Introduction: Radiotherapy (RT)-volumes for anal cancer are large and complex when organs at risk (OAR) like testis/small bowel/bladder are at least partially to be shielded. Step-and-shoot intensity modulated radiotherapy (IMRT) may improve the dose distribution but is still time consuming. Intensity modulated radiotherapy (IMAT) might have the potential to produce comparable results with better treatment efficiency. We compared dose distributions generated with IMAT; conformal 3D-RT and step-and-shoot IMRT for typical anal cancer planning target volumes (PTV).

Materials: 8 typical patients with anal cancer treated previously at our department were chosen; A characteristic PTV including the primary tumor; pelvic and inguinal lymph nodes were planned to receive a mean dose of 36 Gray (the dose level given to the whole volume in all patients; no further comparison of partial volumes usually treated to higher doses). IMAT plans were generated with ERGO++ (Elekta; 2 rotations) and compared to a 9 beam step-and-shoot IMRT (Corvus 6.3; Nomos) and the routinely applied refined 3D-RT (Masterplan; Theranostic). (All three planning systems used the same structure set for OAR (bladder; small intestine and rectum) and PTV on identical CT datasets. These 3 treatment techniques were compared using dose-volume histograms (DVH) of the OAR's and PTV. In addition; the conformity index (CI) as described in the RTOG guidelines and the total treatment time (TTT) were analysed.

Results: In the high dose region the IMAT showed the best coverage of the PTV described by the following values (isodose and percentage of prescription dose (PD) encompassing 95% of the PTV/percentage of tissue outside the PTV encompassed by 95% of PD). For IMAT the values are (93.4% / 2%) for IMRT (90.1% / 0%) and for 3D-RT (94.7% / 5%). With values of 1.56 and 1.71 the CI for IMRT and IMAT are better than for 3D-RT and IMAT with values of 1.06 and 1.09; respectively are better than for IMRT with 1.15. The dose for the OAR's for 3D-RT and IMAT were similar with the exception of the bladder (minimal dose to bladder. IMAT 22Gy+ 6.4; 3D-RT 29Gy)

+ 6.74). The TTT considers the beam-on-time (BOT) and the gantry movements. The mean TTT for 3D-RT is 220 seconds and for IMRT 557 seconds. For IMAT A TTT of 180 seconds is estimated .

Conclusion: IMAT produces high quality treatment plans with excellent conformity and homogeneity. The main advantages of this new approach are the shorter treatment delivery time and a lower number of monitor units .

Faculty of Medicine**Dep.** : Oncology**Name** : **Ahmed Yassar A. Abo Madyon****Title** : Influence of Rounded leaf ends on dose Calculation for a typical breast IMRT Patientplan**Authors:** Abo Madyan Y, Wertz H, Polednik M, Lohr F, Wanz F and Lorenz F**Published In** : Strahlenther Onkol**ISSN** 0179 - 7158**Impact Factor** 3.357**Abstract :**

Purpose : The quality assurance (QA) measurements using a homogeneous thorax phantom for a breast IMRT plan revealed a remarkable; unusual discrepancy between calculation and measurement in some small regions. The reason for this discrepancy and its clinical effect are investigated here .

Methods : The investigated breast case was a static IMRT plan with beams/19segments delivering SOGy on a 6MV Elekta Synergy linac. The beam angles were mainly concentrated at opposing positions. Overlapping and abutting segments were unavoidable in this case and beamlets of abutting segments often intersected at the thoracic wall. The dose calculation was performed using a pencil beam (pb) algorithm (Precise PLAN 2.15); which does not account for rounded leaf ends; and a well-commissioned Monte-Carlo(MC) calculation (Precise PLAN/xvmc 2.50); which includes a model for the rounded leaf ends. The treatment plan was delivered with original gantry angles to a homogeneous thorax phantom and verified using EDR2 films. Both; the measured and the two calculated dose distributions; were compared in terms of profiles and isocrosses. In addition; the calculated dose distributions from MC and pb were compared using the patient CT-dataset to correlate the measured dose distributions to patient's anatomy.

Results : The MC calculation agreed very well with film measurements (less than 1% difference) in the homogeneous phantom. However; the deviation between pb calculation and film measurements was up to 8% (pb underestimates delivered dose); especially in region where different segments have a common edge. Since rounded leaf ends are considered in the MC calculation and good agreement was obtained with film measurement everywhere; the 3D dose distribution in the patient CT-dataset was also analyzed. This analysis revealed hot spots in the PTV and a generally hot area in the thoracic wall not accounted for by pb calculations. The DVH on the CT-dataset showed the following Results : a) the minimum; mean; and maximum dose and the V46 Gy of the

thoracic wall were 37.2 Gy; 49.7Gy; 57.1Gy and 89% for MC calculations : 34.6Gy; 48.1Gy; 55.3Gy and 80% for pb calculations : b) The maximum dose in the PTV were 58.5Gy (MC) and 55.3Gy (pb) : c) the mean lung dose and the lung volume receiving 20Gy and 30Gy (V20 V30) were 14.3Gy 26.6% and 20.9% for MC calculations; 11.6Gy; 22.4% and 18.4% for pb calculations.

Discussion : Since MC calculation; modeling the effects of rounded leaf ends correctly; agreed well with the measurements in the homogeneous phantom; this MC algorithm was also used to estimate the extent of the hot areas in the actual patient anatomy not accounted for by pb; especially in the thoracic wall. Even though the difference between MC and pb calculation in the lung tissue may be caused by other reasons; the remarkable difference in the thoracic wall is caused primarily by using abutting segments; since the rounded leaf ends are not modeled in the pb calculation.

Faculty of Medicine**Dep. :** Oncology**Name :** Ahmed Yassar A. Abo Madyon**Title :** Improving the dose Homogeneity for Tangential Breast Radiotherapy Using A Virtual Wedge System with Independent Orientation Relative to the Collimator Angle.**Authors:** Abo-Madyan Y, Polednik M, Steil V, Wolff D, Lohr F and Wenz F.**Published In :** Strahlenther Onkol**ISSN** 0179 - 7158**Impact Factor** 3.357**Abstract :**

Background : Despite the introduction of new radiotherapy techniques; post-operative irradiation in breast cancer patients is still mainly performed with two tangential opposed fields. The advantages of this technique include simplicity in planning and delivery; reliability and reproducibility; A frequent problem of tangent treatment; is the hot region at the lower part of the breast and the corresponding cold region at the upper part of the irradiated volume. Correcting this imbalance usually requires further rotation of the collimator so that the thick end of the wedge is pointing more to the caudal end of each field. In doing so; the MLC-fit to the posterior edge of the PTV is not optimal which leads to increased lung exposure. Replacing the physical wedge with a virtual wedge for which the direction can be freely chosen with respect to leaf orientation may alleviate this problem. Additional benefits of a virtual wedge approach are better MU-Efficiency and less dose scatter. The use of the virtual wedge allowed us to first optimize the direction of the MLC aperture (for target coverage; risk organ shielding) and then to optimize the wedge direction and angle. We quantified the advantage of this approach by DVH analysis .

Materials and Methods : The treatment planning CT datasets of 10 breast cancer patients previously treated in our department were imported into the treatment planning system precise PLAN (Elekta Oncology Systems; Crawley. UK). The reference plans were created using two tangential wedged fields. The collimator angle was chosen to allow for the best MLC fit to the posterior edge of the CTV. In the experimental plans the same setup was used but with replacing the conventional wedge with the Omni-Wedge. Omni Wedgea provided in the Elekta Synergy linac is an extension of the common virtual wedge concept. It combines an open field segment; a motorized wedge segment and an orthogonal wedge segment delivered as in step-and-shoot IMRT. The OmniWedgea orientation was chosen based on the 3D dose display; aiming at minimizing and equally distributing the hotspots throughout the CTV. This was followed

by further plan evaluation through the DVH and isodose distribution.

Results : The average volume receiving less than 95% of the prescribed dose was reduced using OmniWedgea from 133% to 9.8% and the dose encompassing 95% of the CTV was increased from 90.8% of prescription dose to 93% . The average volume of the PTV receiving more than 107% of the prescribed dose was reduced from 7.7% to 4.7% in plans with Omni-Wedgea.

Discussion : The comparison between a wedge system with fixed orientation relative to the MLC aperture and OmniWedgea showed improved dose homogeneity in the breast with the independent wedge system while maintaining the planning and treatment efficiency of the approach. The reduction of the under-and overdosed volumes may improve tumor control and cosmesis respectively.

Faculty of Medicine

Dep. : Oncology

Name : Ahmed Yasser Abo-Madyan



Title : Improving Dose Homogeneity in Large Breasts by IMRT

Authors: Yasser Abo-Madyan, Martin Polednik, Angelika Rahn, Frank Schneider, Barbara Dobler; Frederik Wenz and Frank Lohr.

Published In : Strahlentherapie und Onkologie

ISSN 0179 - 7158

Impact Factor 3.6

Abstract :

Purpose: Evaluation of a simplified intensity-modulated irradiation (IMRT); a three-field (MFT); and a conventional two-tangential-field technique regarding dose homogeneity; target coverage; feasibility and; for the first time; dosimetric reliability in patients with large breasts treated postoperatively for breast cancer on a low-energy linac.

Material and Methods: CT datasets of ten patients with relatively large breast volumes treated for breast cancer were selected.

For each patient; four treatment plans were created: low-energy conventional (C-LE); high-energy conventional (C-HE); three-field (MFT); and a two-field aperture-based IMRT technique. Apertures for the IMRT and MFT were created with the aid of a three-dimensional dose display. Dosimetric accuracy of each technique was evaluated in an anthropomorphic thorax/breast phantom.

Results: The mean of planning target volumes receiving < 95% or > 105% of the prescribed total dose was reduced from 16.0% to 13.9% to 10.4% to 8.9% in the C-LE; C-HE; MFT; and IMRT plans; respectively. Phantom dose measurements agreed well with the calculated dose within the breast tissue.

Conclusion: Aperture-based IMRT using two tangential incident beam directions; as well as a three-field technique with inverse optimization; provide a better alternative to the standard wedged tangential beams for patients with large breasts treated on low-energy linacs while maintaining the efficiency of the treatment-planning and delivery process.

Keywords:

Aperture-based IMRT; Three-field breast treatment; Breast cancer.

Faculty of Medicine**Dep.** : Oncology**Name** : **Moustafa Shawkey****Title** : Vergleich der Anisotropen Aperturbasierten Intensitäts-Modulation mit 3D-Konformaler Bestrahlung für die Therapie Grosser Lungentumoren.**Authors:** Simeonova A, Abo Madyon Y, El Haddad M, Polednik M, Wenz F. and Lohr F.**Published In** : Strahlenther Onkol**ISSN** 0179 - 7158**Impact Factor** 3.357**Abstract :**

Fragestellung : Die suffiziente Bestrahlung ausgedehnter thorakaler Tumervolumina unter Einhaltung der Risikoorgantoleranzen ist manchmal nicht möglich. Für die zweidimensional isotrope Intensitätsmodulation sind die Konsequenzen der craniocaudalen Tumorbewegung nicht vollständig klar. Für grenzwertig große Zielvolumina wurde untersucht; ob die aperturbasierte Intensitätsmodulation ohne relevante Modulation in craniocaudaler Richtung den Handlungsspielraum erweitert.

Methodik: Auf Basis der Planungs-CT-Datensätze von 20 Patienten mit primärem Lungenkarzinom wurden 3D- und anisotrop modulierte IMRT-Pläne verglichen. Das Planungssystem Precise Plan TM (Elekta) ermöglicht die Planung mit beiden Modalitäten auf Basis eines Pencil-Beam-Sisberechnungsalgorithmus. Für die IMRT werden zunächst manuell die Bestrahlungssegmente generiert. Dadurch ist es möglich, die Intensität selektiv in X/Y-Richtung zu modulieren und in Z-Richtung konstant zu halten. Es erfolgt dann als zweiter Schritt eine inverse Optimierung der Segmentgewichte. Es wurden modellhaft Pläne in radikaler Dosierung gerechnet (60 Gy Verschreibungsdosis für die Lymphabflusswege (LAW); 70 Gy für den Primärtumor (Boost); der Margin zwischen CTV und PTV betrug unter A-1 NAHME DER Verwendung von Trigger/Gatingverfahren für das vorliegende Modell jeweils isotrop 0.5 cm. Dabei wurden konventionelle 3D-Pläne mit 18 MV mit IMRT-Plänen mit 13 bzw; 17 primären Einstrahlrichtungen; jeweils mit 6 und 18 MV verglichen. LAW-PTV und Boost PTV waren nicht überlappend konturiert. Die Normierung gewährleistete für jeden Plan die Applikation von 60 Gy als mittlere Dosis des LAW-PTV (Dosisfixpunkt); die daraus resultierende mittlere Boost-PTV-Dosis war demgemäß etwas variabel. Zum Vergleich der Pläne wurden relevante DVH-Parameter für Risikoorgane und PTV erhoben.

Ergebnisse: Die Toleranzdosen des Rückenmarks wurden in allen IMRT-Plänen eingehalten, was für die 3D-Pläne in 10% der Fälle nicht gelang. Die mittlere

kontralaterale Lungendosis war in allen Fallen (IMRT und 3D) 20 Gy; die ipsilaterale überschritt häufiger für die 3D-Plane (80%) als für die IMRT-Plane (65%) 20 Gy. Die mittlere Boost-PTV-Dosis war für die IMRT-Plane im Mittel 8.7% höher als für 3D. die Dosis; die 95% des LAW-PTV bzw. Boost-TV umschloss; war 5.8% bzw. 8.5% höher für die IMRT-Plane.

Schlussfolgerung: Die IMRT eröffnet für Patienten mit grossvolumigen thorakalen Tumoren an der Grenze der Bestrahlbarkeit eine bessere Lungenschonung bei besserer Erfassung des Zielvolumens und kann damit unter Umständen die Behandelbarkeit dieser Tumoren durch Reduktion des Nebenwirkungsrisikos verbessern. Durch die anisotrope Modulation ist die Technik robust gegenüber longitudinalen Tumorbewegungen. Für die abschließende Beurteilung des potentiellen Vorteils ist die Berechnung auf Monte-Carlo-Basis notwendig. Diese Technik wäre mit modernen Beschleunigern mit hoher Dosisleistung für diese Patientengruppe auch in der klinischen Routine realisierbar.

Faculty of Medicine

Dep. : Ophthalmology

Name : Rehab R. Kassem



Title : A Pilot Study of the Value of Prism Adaptation in Planning Strabismus Reoperations

Authors: Rehab R. Kassem

Published In : Pediatric Ophthalmology & Strabismus

ISSN 0191 - 3913

Impact Factor 0.798

Abstract :

Purpose: To evaluate the value of prism adaptation in planning strabismus reoperations.

Methods: Of 15 patients with persistent strabismus; 9 underwent prism adaptation prior to strabismus reoperation and 6 underwent strabismus reoperation without preoperative prism adaptation. Corrective surgery was performed on the same or new muscles. Follow-up ranged from 3 months to 2 years. A horizontal deviation of 10 prism diopters or less was considered a successful outcome. Statistical analysis of the results was done.

Results: Of the 9 patients who had prism adaptation; 3 (33%) were responders and 6 (67%) were nonresponders. A successful outcome was achieved in 6 patients (67%) who had prism adaptation and 3 patients (50%) who did not. The difference between groups was statistically insignificant ($P > .05$).

Conclusion: These results suggest that the benefits of prism adaptation are not significant enough to justify the time consumption and expenses of this test when planning strabismus reoperations; but a larger group of patients should be studied .

Faculty of Medicine**Dep.** : Ophthalmology**Name** : Tamer Ahmed Abdel Rheem Macky**Title** : Pattern of Ocular Trauma in Egypt**Authors:** Mahmoud M Soliman and Tamer Ahmed Macky**Published In** : Graefes Archive of Clinical and Experimental Ophthalmology**ISSN** 0721 - 832X**Impact Factor** 1.59**Abstract :**

Purpose: To review the epidemiology of serious ocular trauma presenting to Kasr El Aini Hospital; Cairo University.

Methods: This is a prospective epidemiological and clinical study of ocular trauma patients admitted to Kasr El Aini hospital during a 6-month period; January-June 2000. Cases were analyzed with respect to: (1) demographics; (2) time; place and nature of trauma; (3) type of injury; (4) time to receive care; and (5) management and visual outcomes following primary repair.

Results: One hundred and fifty three eyes of 147 patients (six bilateral injuries) sustaining serious ocular injury requiring hospitalization were included during the study period. Eighty percent of ocular trauma occurred in men ($P < 0.001$ chi-square test) with an average age of 22 years (ranging from 2 months to 76 years). There were 123 (80.4%) open globe injuries and 30 (19.6%) closed globe injuries. Of the open globe injuries; 48 eyes (31.4% of all eyes) were ruptured globes and 75 eyes (49% of all eyes) were lacerated globes (37 intraocular foreign bodies; 35 penetrating injuries and three perforating injuries; that is 24%; 23%; and 2% respectively of all injured eyes). Of the closed globe injuries; 5.9% had hyphema (33% of all patients); 4% lamellar lacerations; and 2.5% vitreous hemorrhage with retinal detachment. Most of the injuries occurred (39.5%) and presented (36.7%) between 12:00-5:59 PM: . Eighteen patients (12%) presented after 24 hours; and nine patients (6%) 1 week after the time of trauma. Presenting visual acuity in 123 patients (123 eyes) was as follows: 98 (80%); ten (8%) and 15 (12%) patients had poor; moderate and good visual acuity respectively. Ten eyes developed posttraumatic endophthalmitis (8% of open globe injuries). On leaving the hospital; 77.1% eyes had a visual acuity of less than 1/60 (poor); 3.9% were between 1/60 and 6/60 (moderate); and 19% were 6/36 and/or better (good). Fifty-two (35%) patients were lost in follow-up: at 1 month; 60%; 7% and 33% of the rest had poor; moderate and good visual acuity respectively.

Conclusion: The majority of ocular trauma in our population was due to assaultive injuries occurring mainly in males. Open globe injuries were more common than closed globe injuries; and globe lacerations were more common than ruptured globes. Open globe injuries; especially ruptured globes; had the worst visual outcomes. The initial visual acuity correlated well with the final visual acuity. Immediate and comprehensive medical care is mandatory for ocular trauma patients. Educating the public is essential if we wish to prevent eye injuries.

Keywords:

Ocular Trauma; Epidemiology and Clinical study; Prognostic factors; Visual outcomes. Egypt.

Faculty of Medicine**Dep.** : Orthopaedic Surgery**Name** : **Iman A. Seoud****Title** : Monovalent Type 1 Oral Poliovirus Vaccine in Newborns

Authors: Nasr El-Sayed M., Yehia El-Gamal, Ahmed-Amr Abbassy, Iman Seoud, Maha Salama, Amr Kandeel, M. Elham Hossny, Ahmed Shawky, Heba Abou Hussein, Mark A. Pallansch, Harrie G.A.M. van der Avoort, Anthony H. Burton; B.S, Meghana Sreevatsava, M. Pradeep Malankar, Mohamed H. Wahdan, and Roland W. Sutter; M.P.H.T.M.

Published In : New England Journal of Medicine**ISSN** 0028 - 4793**Impact Factor** 52.589**Abstract :**

Background: In 1988; the World Health Assembly resolved to eradicate poliomyelitis. Although substantial progress toward this goal has been made; eradication remains elusive. In 2004; the World Health Organization called for the development of a potentially more immunogenic monovalent type 1 oral poliovirus vaccine. **Methods:** We conducted a trial in Egypt to compare the immunogenicity of a newly licensed monovalent type 1 oral poliovirus vaccine with that of a trivalent oral poliovirus vaccine. Subjects were randomly assigned to receive one dose of monovalent type 1 oral poliovirus vaccine or trivalent oral poliovirus vaccine at birth. Thirty days after birth; a single challenge dose of monovalent type 1 oral poliovirus vaccine was administered in all subjects. Shedding of serotype 1 poliovirus was assessed through day 60. **Results:** A total of 530 subjects were enrolled; and 421 fulfilled the study requirements. Thirty days after the study vaccines were administered; the rate of seroconversion to type 1 poliovirus was 55.4% in the monovalent-vaccine group; as compared with 32.1% in the trivalent- vaccine group ($P < 0.001$). Among those with a high reciprocal titer of maternally derived antibodies against type 1 poliovirus (> 64); 46.0% of the subjects in the monovalent-vaccine group underwent seroconversion; as compared with 21.3% in the trivalent-vaccine group ($P < 0.001$). Seven days after administration of the challenge dose of monovalent type 1 vaccine; a significantly lower proportion of subjects in the monovalent-vaccine group than in the trivalent-vaccine group excreted type 1 poliovirus (25.9% vs. 41.5%; $P = 0.001$). None of the serious adverse events reported were attributed to the trial interventions. **Conclusions:** When given at birth; monovalent type 1 oral poliovirus vaccine is superior to trivalent oral poliovirus vaccine in inducing humoral antibodies against type 1 poliovirus; overcoming high preexisting levels of maternally derived antibodies; and increasing the resistance to excretion of type 1 poliovirus after administration of a challenge dose. (Current Controlled Trials number; ISRCTN76316509).

Faculty of Medicine

Dep. : Orthopaedic Surgery

Name : **Khaled Hamed Salem**



Title : Long Term Results with the Ilizarov Technique for Tibiocalcaneal fusion

Authors: Khaled Hamed Salem

Published In : Orthopedics

ISSN 0147 - 7447

Impact Factor 0.581

Abstract :

Talar necrosis and infection are serious complications that have challenged orthopedic surgeons for years. In this study; 6 patients who underwent tibiocalcaneal fusion using the Ilizarov technique; predominantly for posttraumatic talar osteitis; were reviewed after mean follow-up of 8 years. Solid fusion was obtained in all cases. In 5 patients; simultaneous lengthening was performed through a proximal tibial corticotomy. Complications were related primarily to pin insertion sites. The Ilizarov technique can be used successfully for tibiocalcaneal fusion in complex cases with talar osteitis that otherwise may ultimately require amputation.

Keywords:

Ilizarov; Talar Necrosis; Tibiocalcaneal Fusion.

Faculty of Medicine

Dep. : Orthopaedic Surgery

Name : Mohamed Taha El-Shewy



Title : Open Reduction and Posterior Capsular Shift for Cases of Neglected Unreduced Posterior Shoulder Dislocation

Authors: Mohamed Taha El-Shewy, Hassan Magdy El-Barbary, Yasser Hassan El-Meligy and Sherif Ahmed Khaled

Published In : American Journal of Sports Medicine

ISSN 0363 - 5465

Impact Factor 3.397

Abstract :

Background: Neglected unreduced posterior shoulder dislocation is a challenging orthopaedic problem.

Purpose: To evaluate the results of open reduction with posterior cruciate capsular repair for such cases. This corrects the wide posterior capsule; which is the main pathologic entity.

Study design: Case series; level of evidence 4.

Methods: Over a period of 5 years; 17 patients with unreduced neglected posterior shoulder dislocation with an impression fracture involving less than 25% of the humeral head were treated by open reduction together with posterior cruciate capsular repair as described by Neer. The patients' average age was 48.5 years (range; 32.5-66 years). There were 14 men and 3 women. The dominant shoulder was affected in 14 cases.

Results: After a minimum follow-up of 5 years (range; 5-10 years); the average UCLA score improved from 18 preoperatively to 33 postoperatively. The average modified Rowe score changed from 42.2 to 78.4 points. The American Shoulder and Elbow Surgeons Shoulder score showed an average of 40.3 points preoperatively and an average of 79.8 points at final follow -up. Three patients developed late osteoarthritic changes. Two had changes of mild degree; and 1 needed a total shoulder replacement .

Conclusion: open reduction with posterior cruciate capsular repair offers a good solution for the problem of neglected unreduced posterior shoulder dislocation excluding cases with osteoarthritic changes and those with impression fracture involving less than 25% of the head.

Keywords :

Neglected posterior dislocation; Open reduction; Capsular repair; Long-term follow-up.

Faculty of Medicine

Dep. : Otolaryngology

Name : Zoheir El-Hoshy



Title : Congenital Aural Atresia: Transmastoid Approach; an Old Technique with Good Results

Authors: Zoheir El-Hoshy, Mosaad Abdel-Aziz and Mohamed Shabana

Published In : International Journal of Pediatric Otorhinolaryngology

ISSN 0165 - 5876

Impact Factor 0.85

Abstract :

Objective: Congenital aural atresia prevents sound conduction to the inner ear; so the child may suffer learning problems. Transmastoid approach is a safe method to create functional pathway by which sound can reach the cochlear fluids but it leaves mastoid cavity which may be problematic. The purpose of this study is to assess the feasibility of improving hearing in those patients on the expense of mastoid cavity.

Methods: Forty children with congenital aural atresia were included in this study. All had functioning cochlea on evoked response audiometry and normal cochlear morphology with pneumatized mastoid on CT scan. Transmastoid approach was used for reconstruction of the external auditory canal with covering of the newly created canal using split thickness skin graft. Reconstruction of the tympanic membrane was carried out by temporalis fascia graft. Follow-up of the patients for 3 years was carried out.

Results: Surgical success is considered on restoration of hearing and maintenance of a patent; infection-free ear canal. This study showed a successful hearing result in 85% of patients at 3 months postoperatively; this result diminished to 65% after 3 years. The incidence of canal restenosis was 17.5%; the narrowing was in the outer cartilaginous part. No cases developed facial nerve paralysis or sensorineural hearing loss postoperatively.

Conclusions: Congenital aural atresia is one of the most difficult and challenging surgeries for the otologic surgeon. However; in the hands of experienced otologists; repair of this deformity can be performed safely and with predictable results using transmastoid approach.

Keywords :

Congenital aural atresia; Auditory canal atresia; Meatal atresia; Ear deformity.

Faculty of Medicine

Dep. : Otolaryngology

Name : Mosaad Abdel-Aziz



Title : Closure of Anterior Post-Palatoplasty Fistula Using Superior Lip Myomucosal Flap

Authors: Mosaad Abdel-Aziz, Wael Abdel-Nasser, Hassan El-hoshy, Ahmed Hisham and Badawi Khalifa

Published In : International Journal of Pediatric Otorhinology

ISSN 0165 - 5876

Impact Factor 0.851

Abstract :

Objective: (a) Surgical repair of palatal fistulas are technically difficult due to excessive tissue fibrosis with high failure rate. (b) The aim of this study is to evaluate the efficacy of closure of anterior palatal fistula using myomucosal superior lip flap.

Methods: 33 cases with anterior palatal fistulas after cleft palate repair were subjected to closure in two-layers; the first is the oral mucoperiosteum hinge flap to reconstruct the nasal side and the second is a myomucosal flap from the inner surface of the superior lip to reconstruct the oral side. Follow up was carried out for 12 months.

Results: The fistulas were completely closed in 30 cases (91%) and partially closed in 3 cases (9%) due to necrosis of the tip of the flap.

Conclusions: Closure of anterior palatal fistula by the use of superior lip myomucosal flap is a useful method with high success rate and no morbidity.

Keywords:

Palatal fistula; Cleft palate; Superior lip flap; Palatoplasty.

Faculty of Medicine

Dep. : Otolaryngology

Name : Mosaad Abdel-Aziz



Title : Congenital Bilobed Posterior third of the Tongue: A Case Report

Authors: Mosaad Abdel-Aziz

Published In : International Journal of Pediatric Otorhinolaryngology Extra

ISSN 1871 - 4048

Impact Factor

Abstract :

The tongue is a very important organ; as it plays an important role in deglutition and a cardinal role in articulation of speech. Bilobed or incomplete bifid tongue is not a well-known congenital anomaly for otolaryngologists. Bifid tongue involving the anterior two thirds has been reported before while no cases reported to have bifid (complete or incomplete) posterior third. A case of 5 years old girl with bilobed posterior third of her tongue is presented. According to literature search this appears to be the first case published on such lesion.

Keywords :

Bilobed tongue; Bifid tongue; Congenital anomalies.

Faculty of Medicine

Dep. : Otolaryngology

Name : Mosaad Abdel-Aziz



Title : Palatopharyngeal Sling: A New Technique in Treatment of Velopharyngeal Insufficiency

Authors: Mosaad Abdel-Aziz

Published In : International Journal of Pediatric Otorhinolaryngology

ISSN

0165 - 5876

Impact Factor

0.851

Abstract :

Objective: (a) Pharyngeal flap and sphincter pharyngoplasty are the procedures most frequently chosen by craniofacial surgeons for surgical management of velopharyngeal insufficiency. Both operations may be complicated by obstructive breathing and even sleep apnea. (b) The purpose of this study is to evaluate the efficacy of a palatopharyngeal sling in the treatment of velopharyngeal insufficiency in cases with weak palatal mobility and its effect on breathing.

Methods: Seventeen cases of post-palatoplasty velopharyngeal insufficiency were subjected to treatment by palatopharyngeal sling. This sling; created by elevation of bilateral myomucosal flaps formed of palatopharyngeus and superior constrictor muscles; passed through palatal split; sutured together and to a raw area on the oral surface of the soft palate. Pre- and post-operative evaluation was carried out by perceptual speech analysis and flexible nasopharyngoscopy. Polysomnography was used to assess the effect of the operation on breathing.

Results: Complete closure was achieved in 13 cases (76.5%) while 4 cases showed incomplete closure (2 of them showed improvement when compared with the preoperative video). The overall improvement of speech and velopharyngeal closure was 88.2%. Polysomnography showed no obstructive breathing.

Conclusions: Palatopharyngeal sling is a useful technique for correction of velopharyngeal insufficiency in cases with little palatal motion and it carries no risk of obstructive sleep apnea .

Keywords:

Palatopharyngeal sling; Velopharyngeal insufficiency; Pharyngeal flap; Sphincter pharyngoplasty.

Faculty of Medicine

Dep. : Otolaryngology

Name : Mosaad Abdel-Aziz



Title : the Use of Buccal Flap in the Closure of Posterior Post-Palatoplasty Fistula

Authors: Mosaad Abdel-Aziz

Published In : International Journal of Pediatric Otorhinolaryngology

ISSN 0165 - 5876

Impact Factor 0.851

Abstract :

Objective: Palatal fistulation is a common complication after cleft palate repair; it could occur at any site along the line of cleft closure. Many techniques have been proposed for its repair. However; the incidence of recurrence after initial fistula closure is high. The aim of this study is to evaluate the efficacy of closure of posterior palatal fistula using buccal myomucosal flap.

Method: Fifteen cases with posterior palatal fistulas -after cleft palate repair- were included in this study. Their fistulas were closed in two-layers; an oral mucoperiosteum hinge flap to reconstruct the nasal side and a buccal myomucosal flap from the inner surface of the cheek to reconstruct the oral side. Follow-up was carried out for 1 year.

Results: The fistulas were completely closed in all cases (100%) with no failure or recurrence. This was a single-stage operation in all cases; with no need for further procedure to divide the pedicle of the flap.

Conclusions: Closure of posterior palatal fistula using buccal myomucosal flap in addition to mucoperiosteal flap is a useful method with high success rate and no morbidity.

Keywords:

Palatal fistula; Cleft palate; Palatoplasty; Buccal flap.

Faculty of Medicine

Dep. : Otolaryngology

Name : Mosaad Abdel-Aziz



Title : Nodular Fasciitis of the External Auditory Canal in Six Egyptian Children

Authors: Mosaad Abdel-Aziz, Hany Khattab, Hussam El-bosraty, Hassan El-hoshy, Ahmed Hesham and Hayam W. Al-taweel

Published In : International Journal of Pediatric Otorhinolaryngology

ISSN 0165 - 5876

Impact Factor 0.851

Abstract :

Objective: Nodular fasciitis of external auditory canal may mimic a malignant tumor due to its progressive course; so it was the aim of this study to focus on a new etiology for aural masses to avoid unnecessary aggressive treatment.

Study design: Retrospective study on six children presented with aural masses that were diagnosed pathologically to have nodular fasciitis.

Methods: Presentation of the cases clinically; radiologically and pathologically was carried out. Surgical excision of the lesions was done through the external canal with follow up of the cases for 1 year.

Results: Recurrence was detected in two cases; one after 2 months and the other after 4 months. Re-excision was carried out without recurrence till the end of the follow up period.

Conclusions: Proper diagnosis of this lesion is mandatory to avoid aggressive treatment (radical surgery and/or radiotherapy) as the disease has favorable prognosis with local excision.

Keywords :

Nodular fasciitis; External auditory canal; Aural mass.

Faculty of Medicine

Dep. : Pathology

Name : **Essam Ezzat Ayad**



Title : Quantitative Analysis of Uvular Muscles in Cases of Simple Snoring and Obstructive Sleep Apnea: an Image Analysis Study.

Authors: Essam Ezzat Ayad

Published In : Eur Arch Otorhinolaryngol

ISSN 0937 - 4477

Impact Factor 0.822

Abstract :

Studies on the histopathological changes of the palatine muscles in cases of obstructive sleep apnea (OSA) and simple snoring are controversial; while some authors confirm the presence of muscle hypertrophy and increase in total muscle bulk (obstructive theory); others deny this confirming the presence of muscle atrophy and decrease in the muscle bulk (neurogenic theory); but all these studies depended on subjective observer dependent methods to calculate the muscle bulk. We are carrying a unique study to calculate the muscle bulk in uvular specimens in ten cases of OSA comparing it to ten cases with simple snoring and controls using digital computer dependent software (image analysis). Cases of OSA are associated with definite increase in the total muscle bulk of the palatine muscles when compared to cases of simple snoring and controls. Uvular muscular hypertrophy and the obstructive theory seem to explain-the-pathophysiology-of-OSA.

Keywords:

SOA; Snoring. Image Analysis; Uvular muscles; Pathology.

Faculty of Medicine

Dep. : Pathology

Name : **Essam Ezzat Ayad**



Title : Telepathology in Emerging Countries; Pilot Project Between Italy and Egypt.

Authors: Essam Ezzat Ayad

Published In : Diagn Pathol

ISSN 1472-6750

Impact Factor

Abstract :

Pathological examination includes gross & microscopic examinations at different magnification. Through the steps of examination; we obtain many images that can be used for telepathology. Telepathology is the practice of pathology at a distance; viewing images on a monitor rather than directly through a light microscope. It can be used for primary diagnosis; second opinion; quality assurance and distance learning. Telepathology is classified into Static; Dynamic; Hybrid and Whole Slide Imaging (WSI). We have a successful experience in Egypt in applying the static & dynamic techniques in a pilot project between the Italian Hospital in Cairo (NPO) and the Civico Hospital in Palermo. This project began in 2003 and continued till now. From the second year 2004; Ospedale S. Giovanni e Paolo Hospital in Venice; Charing Cross Hospital in London and the University of Pittsburgh Medical Center Health System (UPMC) in the USA participated actively in our project. During the past five years we consulted on many problematic pathological cases with these different specialized pathological centers in Italy; UK & USA. In addition to the highly specialized scientific value of consulting on the cases and exchanging knowledge; we saved a lot of time and money and succeeded in providing our patients with a better medical service. We are now in the process of establishing a Digital Telepathology Center (DTC) in the pathology department; Cairo University; using the latest technique of telepathology which is Whole Slide Imaging (WSI). We believe that it will help us to improve and extend diagnosis for our difficult pathological cases and will facilitate increased E-learning opportunities for staff and students both in Egypt and in the longer term in the wider Eastern Mediterranean.

Keywords :

Telepathology; Italy; Egypt.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Maha Korany Mohamed Ali Abou Khadra



Title : Determinants of Regional Cerebral Oxygenation in Children with Sleep Disordered Breathing

Authors: Maha Abou Khadra, Keith McConnell, Rhonda VanDyke, Virend Somers, Matthew Fenchel, Syed Quadri, Jenny Jefferies, Aliza P Cohen, Michael Rutter, and Raouf Amin.

Published In : American Journal of Respiratory and Critical Care Medicine

ISSN 1073 - 449X

Impact Factor 9.091

Abstract :

Rationale: An association between neurocognitive deficits and pediatric sleep-disordered breathing has been suggested; however; weak correlations between disease severity and functional outcomes underscore the lack of knowledge regarding factors modulating cognitive morbidity of sleep-disordered breathing.

Objectives: To identify the parameters affected by sleep-disordered breathing that modulate cerebral oxygenation; an important determinant of cognition. A further objective was to use these parameters with demographic data to develop a predictive statistical model of pediatric cerebral oxygenation.

Methods: Ninety-two children (14 control subjects; 32 with primary snoring; and 46 with obstructive sleep apnea) underwent polysomnography with continuous monitoring of cerebral oxygenation and blood pressure. Analysis of covariance was used to relate the blood pressure; sleep diagnostic parameters; and demographic characteristics to regional cerebral oxygenation.

Measurements and Main Results: To account for anatomic variability; an index of cerebral oxygenation during sleep was derived by referencing the measurement obtained during sleep to that obtained during wakefulness. In a repeated measures model predicting the index of cerebral oxygenation; mean arterial pressure; rapid eye movement (REM) sleep; female sex; age; and oxygen saturation had a positive effect on cerebral oxygenation levels; whereas arousal index and non-REM (NREM) sleep had a negative effect.

Conclusions: Increasing mean arterial pressure; age; oxygen saturation; and REM sleep augment cerebral oxygenation; while sleep disordered breathing; male sex; arousal index; and NREM sleep diminish it. The proposed model may explain the sources of variability in cognitive function of children with sleep-disordered breathing.

Keywords :

Children; Sleep-disordered breathing; Cerebral oxygenation.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Amal El-Beshlawy



Title : Assessment of Puberty in Relation to L-carnitine and Hormonal Replacement Therapy in b-thalassemic Patient

Authors: Amal El Beshlawy, Galila Mohtar, Esmat Abd El Ghafar, Soha M. Abd El Dayem, Manal Hamdy El Sayed, Aza Ahmed Aly, and Manal Farok.

Published In : Pediatric Hematology and Oncology

ISSN 0888 - 0018

Impact Factor 0.72

Abstract :

Objective: To investigate puberty in a group of thalassemic patients with delayed or arrested pubertal development and to compare the effects of hormonal and L-carnitine therapy on puberty in those patients.

Patients: Thirty-two -thalassemic patients with arrested or failure of puberty were enrolled for 1 year in this study. Method: Clinical pubertal assessment and laboratory investigations were done for all patients at the beginning; 6 months later clinical pubertal assessment was done. Patients were divided into two groups (16 each): first group received L-carnitine therapy; while the second group received hormonal therapy. Pubertal and laboratory assessment were done 6 months after hormonal and L-carnitine therapy.

Results: Failure of puberty was confirmed in 71.4% of boys and 33.3% of girls; while arrested puberty was observed in 28.6% of boys and 66.7% of girls. All girls had amenorrhea; primary amenorrhea in 88.9% and secondary amenorrhea in 11.1%. Menses occurred in 20% of female patients after L-carnitine therapy and in 37.5% of them after hormonal therapy. Improvement of pubertal staging was observed in 50% of males after L-carnitine therapy compared to 75% of them after hormonal therapy. While improvement of pubertal staging was seen in 90% of females after L-carnitine therapy compared to 100% of females after hormonal treatment. However; these results showed no significant difference between both groups

Conclusion: Delayed puberty in b-thalassemia major is either due to failure of gonads or failure of the whole hypothalamic pituitary gonadal axis. L-carnitine as well as hormonal replacement therapy had a positive effect on puberty in the thalassemic patients. Further studies are needed to clarify the role of L-carnitine on puberty in these patients.

Keywords:

Puberty; L-carnitine; Hormonal therapy; b-thalassemic.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Amal El-Beshlawy



Title : Correction of Aberrant Pre-mRNA Splicing by Antisense Oligonucleotides in b-Thalassemia Egyptian Patients With IVSI-110 Mutation

Authors: Amal El-Beshlawy, Azza Mostafa, Ilham Youssry, Hala Gabr, Iman M. Mansour, Manar El-Tablawy, Mona Aziz, and Ibtissam R. Hussein.

Published In : Pediatric Hematology and Oncology

ISSN 1077 - 4114

Impact Factor 1.278

Abstract :

The splicing mutation in intron 1 of b-globin gene (IVS1-110) is the most common mutation in Egyptian thalassemics that causes aberrant splicing of pre-mRNA and deficient b-globin chain synthesis. Antisense oligonucleotides (ASONS) are compounds that redirect pre-mRNA splicing and modify gene expression. Our aim was ex vivo correction of the aberrant splicing of b-globin110 pre-mRNA by ASON against the 30 aberrant splice site. Peripheral blood mononuclear cells of 10 thalassemic patients with IVS1-110 mutation were duplicated and 1 was treated with 20 mmol/mL morpholino ASON targeted against the 30 aberrant splice site. The level of total hemoglobin (Hb); fetal Hb; and mRNA were estimated in the duplicate samples. Five cases (50%) showed correction with ASON treatment; of which 2 cases showed the appearance of corrected mRNA band with absence of the aberrant band and 3 cases showed an increased ratio of the corrected to the aberrant mRNA band from 2:1 to 3:1; and 4:1. The total Hb showed significant increase in the 5 corrected cases. In conclusion; ASON can restore correct splicing of b-globin pre-mRNA leading to correct gene product in cultured erythropoietic cells. These results suggest the applicability of ASON for the treatment of thalassemia.

Keywords :

B-Globin gene; Splicing mutations; Antisense oligonucleotides; Thalassemia.

Faculty of Medicine**Dep. :** Pediatric Hematology**Name :** Amal El-Beshlawy**Title :** Pulmonary Hypertension In -Thalassemia Major And The Role Of L-Carnitine Therapy**Authors:** Amal El-Beshlawy ; Ilham Youssry ; Sonia El-Saidi ; Ramzi El Accaoui ; Yassmin Mansi and Ali Makhoulouf**Published In :** Pediatric Hematology and Oncology**ISSN**

0888 - 0012

Impact Factor

0.72

Abstract :

Cardiac complications; such as pulmonary hypertension (PHT); are the leading cause of death in β -thalassemia patients. L-Carnitine; due to its role in fatty acid oxidation; might help control the elevation in pulmonary artery systolic pressure (PASP). The objectives of this study were to assess the prevalence of PHT in β -thalassemia major patients; identify clinical predictors for its development; and determine the potential effects of L-carnitine. In total; 32 patients with β -thalassemia major were recruited; 16 age- and sex-matched children constituted the control group. Cardiac evaluation was performed by using echocardiography. The patients with PHT received 50 mg/kg/day L-carnitine orally for 3 months and were then reevaluated. Based on PASP; the patients were divided into group A without PHT and group B with PHT. The prevalence of PHT was 37.5%. The other echocardiographic measurements were not significantly different between groups A and B. PASP did not have any significant correlation with the following variables: age; total number of blood units received; splenic status; serum ferritin level; and ejection fraction. Following the administration of L-carnitine; there was a significant decrease in the mean PASP from 33.96 ± 7.85 to 24.11 ± 7.61 . All cardiac dimensions decreased following L-carnitine; but the changes were not statistically significant. Even though β -thalassemia major resulted in an elevation in the PASP in only a fraction of the patients; it seems to have an impact on the heart dimensions and function of all patients. No clinical predictors were identified. Oral administration of L-carnitine appears to significantly improve PASP.

Keywords :

L-Carnitine; Echocardiography; Pulmonary hypertension; Thalassemia.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Amal El-Beshlawy



Title : Iron Chelation in Thalassemia: Combined or Monotherapy; the Egyptian Experience

Authors: Amal El-Beshlawy, Chantal Manz, Mohammed Naja, Mona Eltagui, Claudia Tarabishi, Ilham Youssry, Hewida Sobh, Mona Hamdy, Iman Sharaf, Azza Mostafa, Olfat Shaker, A. V. Hoffbrand, and Ali Taher.

Published In : Ann Hematol

ISSN 1077-4144

Impact Factor 1.278

Abstract :

Patients with thalassemia major requiring regular blood transfusions accumulate iron that is toxic to the heart; liver; and endocrine systems. The following prospective; randomized trial was carried out to determine the effectiveness; in children and young adults; of combined deferiprone (DFP) and deferoxamine (DFO) in reducing transfusional iron overload compared to either drug alone and to assess the safety and tolerability of DFP. Sixty-six patients were randomized into three treatment arms: daily DFP combined with DFO twice weekly; daily DFP only; and DFO only 5 days/week. Fifty-six patients completed the 54 weeks and were assessed by different indices. A significant reduction of liver iron concentration and serum ferritin was observed in all three arms while significant reduction of liver iron score was observed in patients on combination therapy only. Cardiac function did not significantly change in any arm. Compliance improved in patients who received combined therapy. Toxicity of DFP was mild to moderate and acceptable; most commonly; transient arthropathy and nausea/vomiting were observed. Thus; combination therapy has shown to be effective in reducing iron overload in thalassemia patients.

Keywords:

Thalassemia major; Egypt; Combination therapy; Monotherapy; Efficacy.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Amal El-Beshlawy



Title : the use of DNA Markers for Carrier Detection and Prenatal Diagnosis of Haemophilia A in Egyptian Families

Authors: Amal El-Beshlawy, Lamis Ragab and Nadia Zagloul

Published In : Haemophilia

ISSN 1082 - 1087

Impact Factor

Abstract :

Haemophilia A is the most common inherited X-linked recessive bleeding disorder. The aim was to investigate the usefulness of two DNA markers in linkage analysis; one intragenic BCL1 affecting restriction site in intron 18; and is detected as restriction fragment length polymorphism (RFLP); and one extragenic variable number of tandem repeat (VNTR) locus DXS52 (St14) to formulate an informative and accurate carrier detection and pre-natal diagnosis. The study included 46 families with at least one child affected with haemophilia A; and 30 unrelated normal females as control group. Polymerase chain reaction (PCR) and restriction enzyme analysis were used to study the polymorphism in BCL1; and long-distance PCR for detection of VNTR (ST14) alleles. The incidence of BCL1 (+) allele was 74%; 72% and 60% in patients; mothers and control group; respectively. Expected heterozygosity for BCL1 was 40% in mothers of affected cases compared with 48% in the female control group. However; observed heterozygosity was found to be 48% in the mothers of affected cases; compared with 60% in the control group. Thus; 48% of the studied families are informative for this marker alone. Nine different alleles of VNTR (St14) and 700 bp (13.6% and 20%) in patients and their mothers; respectively. Observed heterozygosity in mothers was 41% compared with 43.3% in controls. The combined use of both BCL1 and St14 markers raised the informative rate to 63.6%. Carrier detection and prenatal diagnosis is possible in haemophilia A families using both DNA markers. We suggest screening haemophilic families first for BCL1 polymorphism followed by analysis of St14 locus.

Keywords:

Carrier Detection; DNA Markers; Factor VIII; Haemophilia A.

Faculty of Medicine

Dep. : Pediatric Hematology

Name : Magda Mahmoud Sedky Badawy



Title : Randomized Controlled Trial on Tracheal Colonization of Ventilated Inuits: Congravity Prevent Ventilator Associated Pneumoni

Authors: Magda Mahmoud Sedky Badawy

Published In : Pediatrics

ISSN 0031 - 4005

Impact Factor 4.473

Abstract :

Objective.The goal was to test the hypothesis that intubated infants positioned on their sides would be less likely to contract bacterial colonization in their tracheae, compared with those positioned supine.

Methods. We conducted a prospective, randomized, controlled trial with 60 intubated infants; 30 infants were Positiotled supine (supine group), and 30 infants were maintained in the lateral position (lateral group). Tracheal aspirates were cultured and bacterial colony counts were recorded after 48 hours and after 5 days of mechanical ventilation.

Results. After 2 days, the numbers of positive tracheal cultures in the supine group (67%) and in the lateral group (47%) showed no statistical difference. After 5 days of mechanical ventilation, tracheal cultures differed significantly between groups.Cultures were positive for 26 infants (87%) in the supine group and 9 infants (30%) in the lateral group. Compared with the lateral group, more infants in the supine group experienced increased colony counts or had new organisms in their tracheal aspirates over time (21 vs 8 infants). The most common organisms isolated from tracheal aspirates in both groups were Gram-negative rods.

Conclusions. Respiratory contamination is very common among ventilated infants. Therefore, judicious use of mechanical ventilation cannot be overemphasized. Grav- itational force can ameliorate the onset of respiratory colonization. The mechanism and clinical applicability of such observations need to be explored further .

Keywords :

Endotracheal tube; Ventilator; Associated preJmonsa; Microbiology; Infants; Preterm; NICU.

Faculty of Medicine

Dep. : Psychiatry

Name : Suaad Sayed Aly Moussa



Title : Use of M-Chat for a Multinational Screening of Young Children with Autism in the Arab Countries

Authors: Amira Seif Eldin, Doa Habib, Amal Noufal, Shewikar Farrag, Khalid Bazaid, Marwan Al-Sharbati, Hanan Badr, Suaad Moussa, Adib Essali and Naoufal Gaddour.

Published In : International Review of Psychiatry

ISSN 0954 - 0261

Impact Factor 1.762

Abstract :

There has been a decline in the mortality rate among infants and children under five years of age in the last decade in many developing countries. This has led to a shift in focus to look beyond survival to the prevention or reduction of impairment and promotion of children's health. With the apparent rise in the prevalence of autism spectrum disorders (ASD) in the Arab countries the development of an Arabic tool for early diagnosis and intervention was sought as part of an effort to better understand the prevalence of this disorder. The Modified Checklist for Autism in Toddlers (M-CHAT) was chosen. The study was conducted in nine Arabic speaking countries. The final analysis included 228 children (122 screened positive for ASD). The sensitivity (0.86); the specificity (0.80) and positive predictive value (0.88) were very similar to Robins et al. study (2001). Maternal health problems during pregnancy and labour were found to be more significant for ASD mothers than their control. In addition; child health problems were more evident among ASD subjects as reported by their parents with significant differences from controls. The limitation of the study is that the sample size is not large enough to generalize the results to all countries of the region. The strength of the study is that it is the first known study where Arab countries undertook a collaborative mental health study using the same tool for screening for a specific disorder.

Keywords :

M-CHAT; Autism.

Faculty of Medicine

Dep. : Radiodiagnosis

Name : Noha Hosam El Din Behairy



Title : Accuracy of Routine Magnetic Resonance Imaging in Meniscal and Ligamentous Injuries of the Knee: Comparison with Arthroscopy

Authors: Noha H. Behairy, Mohsen A. Dorgham and Sherif A. Khaled

Published In : International Orthopaedic

ISSN 0341 - 2695

Impact Factor 0.9

Abstract :

The aim of this study was to detect the accuracy of routine MRI done in different centers and its agreement with arthroscopy in meniscal and ligamentous injuries of the knee. We prospectively examined 70 patients ranging in age between 22-59 years. History taking; plain X-ray; clinical examination; routine MRI and arthroscopy were done for all patients. Sensitivity; specificity; accuracy; positive and negative predictive values; P value and kappa agreement measures were calculated. We found a sensitivity of 47 and 100%; specificity of 95 and 75% and accuracy of 73 and 78.5% respectively; for the medial meniscus and lateral meniscus. A sensitivity of 77.8%; specificity of 100% and accuracy of 94% was noted for the anterior cruciate ligament (ACL) . We found good kappa agreements (0.43 and 0.45) for both menisci and excellent agreement (0.84) for the ACL. MRI shows high accuracy and should be used as the primary diagnostic tool for selection of candidates for arthroscopy. Level of evidence: 4.

Keywords :

Knee; Magnetic resonant imaging; Arthroscopy; Meniscus; Anterior cruciate ligament.

Faculty of Medicine

Dep. : Radiology

Name : Sahar N. Saleem



Title : Microcephaly; Malformation of Brain Development and Intracranial Calcification in Sibs: Pseudo-TORCH or A New Syndrome.

Authors: Ghada M. H. Abdel-Salam, Maha S. Zaki, Sahar N. Saleem and Khaled R. Gaber

Published In : Am Journal of Med Genet A

ISSN 1552 - 4825

Impact Factor 2.44

Abstract :

We report on five sibs affected by congenital microcephaly; growth retardation; sloping forehead; bitemporal grooving and micrognathia. Generalized tonic-clonic seizures started very early in life. Postnatal brain computerized tomography (CT) presented cortical band-like calcification; calcification of basal ganglia and brain stem while brain magnetic resonance imaging (MRI) revealed abnormal gyral pattern; marked loss of white matter; dysplastic ventricles; polymicrogyria; hypogenesis of corpus callosum and cerebellar hypoplasia. No abnormalities of the internal organs; eye; or skeleton were found to be associated with this syndrome. Fetal Magnetic resonance imaging helped reaching the diagnosis in utero in one patient. Three patients died in the first years of life while the others within days after birth preceded by high fever and status epilepticus. These patients present many overlapping features with pseudo TORCH syndrome; however; the imaging findings are quite different. We propose that the distinct pattern in these sibs constitutes genetic disorder of microcephaly; developmental brain malformation and intracranial calcification of likely autosomal recessive inheritance .

Keywords :

Brain; Congenital; Calcification; Microcephaly.

Faculty of Medicine**Dep. :** Radiology**Name :** Sahar N. Saleem**Title :** Feasibility of MRI of the fetal heart with balanced steady-state free precession sequence along fetal body and cardiac planes.**Authors:** Sahar N. Saleem**Published In :** Am Journal of Med Genet A**ISSN** 0361 - 803X**Impact Factor** 2.47**Abstract :**

Objective: The purpose of this study was to evaluate the feasibility of imaging the fetal heart with a balanced steady-state free precession MRI sequence along the body and cardiac axes after inadequate echocardiography.

Subjects And Methods: After technically inadequate echocardiography; MRI was performed on 20 fetuses (mean gestational age; 24 weeks; range; 18-32 weeks) at risk of congenital heart disease. MRI was attempted along the three fetal body planes (n = 20) and cardiac axes (n = 3) without fetal sedation. The images were analyzed with an anatomic segmental approach. Each feature was classified as well visualized or poorly or not visualized. In each group; the Student's t test was used to assess the relation between visibility of fetal cardiac features and gestational age.

Results: Imaging was possible along the fetal body and cardiac axes. In the axial plane; a balanced four-chamber view was obtained in all fetuses; enabling evaluation of heart position; axis; chambers; and interventricular septum. The left and right ventricular outflow tracts were well visualized in 12 (60%) and nine (45%) of the fetuses; respectively; the three-vessel view was obtained in 10 fetuses (50%). With the combination of sagittal and coronal views; both ventricular outflow tracts were assessed in all fetuses. The superior and inferior venae cavae were identified in all fetuses; and at least one pulmonary vein was visualized in 17 fetuses (85%). There were no statistically significant differences between gestational age and lack of visualization of a cardiac feature that was attributed to fetal motion .

Conclusion: MRI of the fetal heart with a steady-state free precession sequence in multiple planes and image analysis with an anatomic segmental approach to congenital heart disease are possible in situations that limit echocardiography.

Keywords :

Fetus; Heart; MRI.

Faculty of Medicine

Dep. : Radiology

Name : Sahar N. Saleem



Title : the Molar Tooth Sign: A New Joubert Syndrome and Related Cerebellar Disorders Classification System Tested in Egyptian Families

Authors: M. S. Zaki, A. Abdel-Aleem, G. Abdel-Salam, S. E. Marsh, J. L. Silhavy, A. J. Barkovich, M. E. Ross and S. N. Saleem

Published In : Neurology

ISSN 0028 - 3878

Impact Factor 6.014

Abstract :

Joubert syndrome and related cerebellar disorders (JSRD) are a group of recessive congenital ataxia conditions usually showing neonatal hypotonia; dysregulated breathing rhythms; oculomotor apraxia; and mental retardation. The pathognomonic finding in JSRD is the unique molar tooth sign (MTS) on brain imaging. There is a tremendously broad spectrum of signs and symptoms mainly including kidney; retina; and liver disease; along with polydactyly and facial dysmorphisms. Here we propose a new diagnostic classification within JSRD that includes four major subtypes. To test this classification; we performed a systematic recruitment and genetic evaluation from a single referral center in Egypt. Thirteen families were identified; four showed evidence of linkage to one of the four known genetic loci; three showed novel AHI1 mutations; and nine were excluded from known loci. Each family could be classified into one of the four subtypes. This classification may thus be useful in the evaluation of patients with JSRD .

Keywords:

Joubert syndrome; Brain; Egypt.

Faculty of Medicine**Dep. :** Rheumatology and Rehabilitation**Name :** Noha Ahmed Azab**Title :** CD4+CD25+ Regulatory T cells (TREG) in Systemic Lupus Erythematosus (SLE) patients: the Possible Influence of Treatment with Corticosteroids**Authors:** N. A. Azab, I.H. Bassyouni, Y. Emad, G.A. Abd El-Wahab, G. Hamdy and M. A. Mashahit**Published In :** Clinical Immunology**ISSN** 1521 - 6616**Impact Factor** 3.551**Abstract :**

Systemic Lupus Erythematosus (SLE) is a chronic; systemic autoimmune disease characterized by loss of tolerance to self-antigens. Regulatory T cells (TREG) are those CD4+ T cells that constitutively express high levels of CD25 and exhibit powerful suppressive properties. The aim of this work was to quantify CD4+CD25+ (TREG) cells and the Mean Fluorescence Index (MFI) of TREG in the peripheral blood of patients with SLE and to correlate these findings with their disease activity scores and drug therapy. This study included 24 SLE patients with various disease activity scores (SLEDAI) and 24 healthy age and sex matched controls. Flowcytometry was used to examine the frequency of CD4+CD25+ T cells and the MFI of CD4+CD25+high T cells (TREG). CD4+ CD25+ T cells % and MFI of CD4+CD25+high T cells were higher in SLE patients than controls (p value=0.62 and=0.037 respectively) and both CD4+CD25+ T cell % and the MFI of CD4+CD25+high T cells showed highly significant correlation with SLEDAI scores (both with a p value< 0.001) and were higher in patients taking glucocorticoids than those not on glucocorticoids (p= 0.023; 0.048 respectively). We conclude that the increase in TREG cells in our patients may be due to corticosteroid treatment.

Keywords:

Regulatory T cells (TREG); Systemic Lupus Erythematosus (SLE); CD4+CD25+ T cells; Corticosteroids.

Faculty of Medicine

Dep. : Rheumatology and rehabilitation

Name : **Hanan El-Said El-Sherif**



Title : Hand Osteoarthritis and Bone Mineral Density in Postmenopausal Women; Clinical Relevance to Hand Function; Pain And Disability

Authors: H. E. EL-Sherif R. Kamal and O. Moaguyah

Published In : Osteoarthritis and Cartilage

ISSN 1063-4584

Impact Factor 3.7

Abstract :

Objective: The aim of the present study was to assess phalangeal bone mineral density (BMD) in postmenopausal females with hand osteoarthritis (OA) and to correlate the measured levels with the radiographic OA grade; pain; function and disability of the hand.

Methods: The study group constituted 40 postmenopausal women with hand OA (range; 45e83 years). Socio-demographic data were collected. They underwent a comprehensive clinical examination of joint status and health outcome measure including Australian Canadian (AUSCAN) OA hand index. Hand radiographs were quantified and graded according to Kellgren and Lawrence (K-L) scoring system. Bone mineral content (BMC) and BMD of the third finger were measured using the accuDEXA (Schick; New York; NY). Twenty females matched for age and years of menopause were studied as a control group.

Results: Phalangeal BMC and BMD were significantly reduced in women with hand OA compared to controls and related to radiological erosive OA. The AUSCAN pain and function subscales were worse in proportion to the severity of hand OA. OA X-ray score was significantly associated with reduced right grip strength; pain; and function scales while; decreased BMD was related to Ritchie index and pain scale.

Conclusion: Postmenopausal women with clinical and radiological hand erosive OA are at risk of development of hand osteoporosis (OP). Phalangeal bone densitometry is an objective reproducible investigation. Poor physical function due to increased pain associated with increasing severity of radiographic hand OA leads to worse BMD results.

Keywords :

Hand osteoarthritis; Osteoporosis; AUSCAN.

Faculty of Medicine

Dep. : Surgery

Name : **Ayman Salah**



Title : Sensitivity and specificity of bispectral index for classification of overt hepatic encephalopathy: a multicentre; observer blinded; validation study.

Authors: A. A Dahaba, H. C Worm, S. M Zhu, F. P Bao, A Salah, S Zakaria, H Bornemann, V Stadlbauer, P. H Rehak, H Metzler and RE Stauber

Published In : Gut 57

ISSN 0017 - 5749

Impact Factor 10.01

Abstract :

Background: The severity of hepatic encephalopathy is currently graded clinically using West Haven criteria and psychometric tests.

Objective: To assess the discriminative power of the bispectral index (BIS) monitor to classify the degree and progression of hepatic encephalopathy.

Design: A consecutive; multicentre; observer blinded validation study. Setting: Medical University of Graz (Graz; Austria); Zhejiang University First Affiliated Hospital (Hang Zhou; China); and Cairo University (Cairo; Egypt).

Patients: 28 consecutive patients with hepatic encephalopathy were first enrolled at Medical University of Graz as a test set. The estimated BIS cut off values were subsequently tested in a validation set of 31 patients at Zhejiang University First Affiliated Hospital and 26 patients at Cairo University; 18 patients were reassessed later in a longitudinal study. Fifteen of 85 patients (18%) were excluded from the final analysis (11 became too agitated with high electromyographic activity; four fell asleep during the recording).

Results: Applying the Austrian BIS cut off values of 85; 70; and 55 for discriminating West Haven grades 1 to 4 yielded agreement between BIS classification and West Haven grades in 40 of the 46 validation patients; (87%) and in 16 of the 18 follow up patients (89%). Mean (SD) BIS values differed significantly between patients with West Haven grade 1 (90.2 (2.5)); grade 2 (78.4 (6.6)); grade 3 (63.2 (4.8)); and grade 4 (45.4 (5.0)).

Conclusions: BIS is a useful measure for grading and monitoring the degree of involvement of the central nervous system in patients with chronic liver disease.

Keywords :

Hepatic encephalopathy; Bispectral index.

Faculty of Medicine

Dep. : Surgery

Name : **Mohammad M. Kenawi**



Title : Windows Vista Optimization and Customization Tips - Part 1.

Authors: Mohammad M. Kenawi

Published In : GoArticles.com

ISSN -

Impact Factor

Abstract :

Windows Vista has deviated to some extent from the path of Windows XP to allow; among other things; for increased speed in performance following the advent of the ultra high speed Duo processors. It has many additional facilities and is a heaven for the experienced. However; it may be a little bit problematic for the novice or for those with little experience. This paper; the first of two; aims at presenting tips for Windows Vista optimization and customization. It addresses the following items:

- 01 .Activating Windows Vista.
- 02 .Activating System Restore.
- 03 .Adjusting Virtual Memory.
- 04 .Completing the Installion of Internet Explorer.
- 05 .Installing a Startup Monitor.
- 06 .Customizing the Startup folder (Running a program automatically when Windows starts).
- 07 .Updating Windows Defender.
- 08 .Adjusting Windows Firewall.
- 09 .Adjusting Program Compatibility
- 10 .Customizing the Right Pane of the Start Menu.
- 11 .Customization of the Favorites Button.
- 12 .Adding the Run Command.
- 13 .Removing the Recent Items Button (Recently Opened Files Menu).
- 14 .Optimizing the Burning of Files to a CD/DVD.

Keywords :

Windows; Windows Vista; Computer Operating Systems; Computer OS; Operating Systems Software; OS Software; Microsoft Software; Operating Systems for computers; Information Technology ; Continuing Education in Information Technology.

Faculty of Medicine

Dep. : Surgery

Name : **Mohammad M. Kenawi**



Title : Windows Vista Optimization and Customization Tips - Part 2.

Authors: Mohammad M. Kenawi

Published In : GoArticles.com

ISSN

Impact Factor

Abstract :

This paper; the second of two on Windows Vista; presents tips for Windows Vista optimization and customization. It aims at making Windows Vista a heaven for the novice or for those with little experience as it is for the experienced. It addresses the following items:

- 01 .User Account Control.
- 02 .Windows Features.
- 03 .Windows Sidebar.
- 04 .NOTEPAD.
- 05 .Animated GIF.
- 06 .Use of Logical Operators in Windows Vista's search bars.
- 07 .Adding a language support different from that in which Windows Vista was installed.
- 08 .Changing the Keyboard language for typing.
- 09 .Sleep state in Windows Vista; and waking from sleep options.
- 10 .Creating a Hibernate (or Shutdown; or Restart) shortcut.
- 11 .When should you shut down a computer that has Windows Vista as the Operating System.?
- 12 .When should you restart your computer.?
- 13 .System Information.

Keywords :

Windows; Windows Vista; Computer Operating Systems; Computer OS; Operating Systems Software; OS Software; Microsoft Software; Operating Systems for computers; Information Technology ; Continuing Education in Information Technology.

Faculty of Medicine**Dep. :** Pharmacology**Name :** Abd El- Rahman El- Naggar**Title :** Cholinesterase Levels and Clinical Findings in Children of Organophosphates and Carbamates Poisoning**Authors:** Abd El- Rahman El- Naggar, Alaa S. El-Sebaey and Sayed M. Badawy**Published In :** Eur. Journal of Pediatr**ISSN** 0340 - 6199**Impact Factor** 1.227**Abstract :**

Introduction. Exposure to organophosphate and carbamate insecticides inhibits cholinesterase activity and interferes with synaptic transmission both centrally and peripherally at muscarinic receptors and nicotinic receptors. The study reported the usefulness of plasma cholinesterase ChE activity assays for diagnosis and the management of organophosphate and carbamate toxicity in children.

Methods. A retrospective study was conducted on children with organophosphate and carbamate poisoning . Forty-seven patients were included. The diagnosis was confirmed by measuring plasma cholinesterase levels. Atropine was given intravenous (0.02 mg/kg) and repeated until secretions were controlled. Obidoxime chloride was administered as 4 – 8 mg/kg/dose for children with organophosphate poisoning and to those in whom the ingested material was unidentified on admission.

Results. Forty-two (89.4%) of the patients were accidentally poisoned through the gastrointestinal route and five patients (10.6%) had skin absorption. All of patients received atropine. Most of the patients showed marked reactivation in plasma ChE within several hours and recovered completely within 24 hours of admission. Complications were observed in seventeen patients (36%). Mechanical ventilatory support was required in six patients. The duration intensive care stay was 3 ± 2.4 days.

Conclusion. Low plasma ChE levels support the diagnosis of insecticides poisoning; but no significant association is present between the severity of poisoning and plasma ChE levels. Atropine should be used as soon as possible to counteract the muscarinic effects. Appropriate management and early recognition of the complications may decrease the mortality rate.

Keywords :

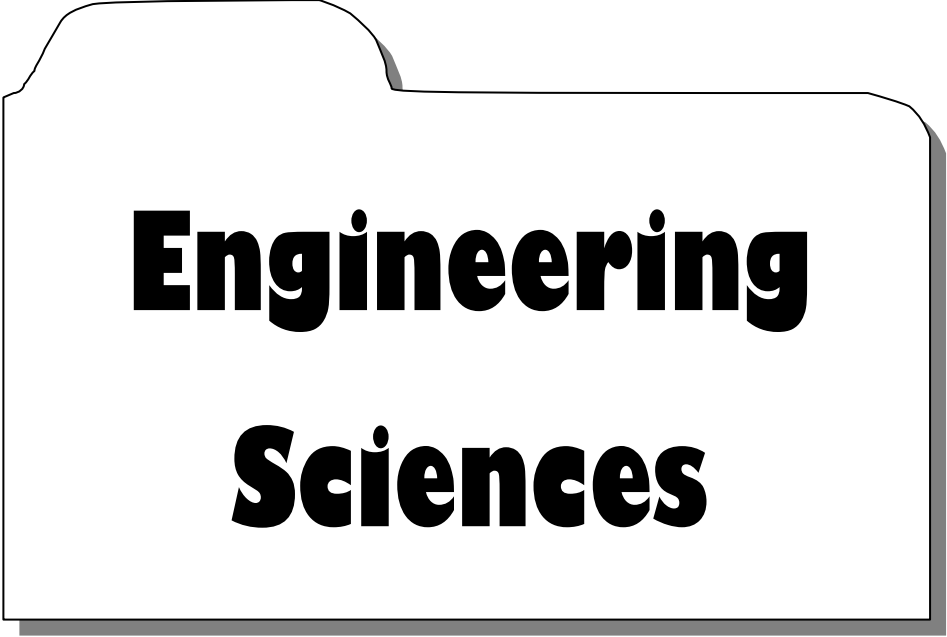
Organophosphates; Carbamates; Poisoning; Cholinesterase activity; Children.

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Index

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